

XII. *Notes on British Mycetophilidae.* By F. W. EDWARDS,  
B.A., F.E.S.

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PLATES XII–XVIII.

IN the preface to his List of British *Diptera*, published in 1901, the late Mr. G. H. Verrall said of the British *Mycetophilidae*, "this family, though much improved, is still in a most unfinished condition." The truth of this remark will be appreciated when it is stated that in the following notes no fewer than 124 species are introduced as new to the list, while nearly 50 names have been proved to be synonyms or wrongly identified; so that the net total of additions is about 70. But Mr. Verrall's remark is still true to some extent, for several genera remain more or less unworked, while even in those which have been studied most, it is evident that many more species remain to be found in Britain, since so many of those now known are represented by single specimens only.

The large increase in the number of British species here made would hardly have been possible from the study of a single collection, and the writer desires to express his thanks to all those to whom he is indebted for the loan of specimens, for the gift of material to the National Collection, and for help in other ways. Of these gentlemen particular mention must be made of Mr. F. Jenkinson of Cambridge, who has very kindly read the proofs of this paper and contributed many useful suggestions, besides giving the writer access to the whole of his very extensive collections.

In the following notes an asterisk has been placed against each species or genus recorded for the first time as British, and the initials of the collector are placed in brackets after each record. The collectors, with the localities from which they have mainly obtained their material, are as follows:—

F.C.A.	Mr. F. C. Adams.	New Forest.
E.A.A.	Mr. E. A. Atmore.	King's Lynn.
A.E.J.C.	Mr. A. E. J. Carter.	Perthshire.
J.E.C.	Mr. J. E. Collin.	Various localities.

F.J.	Mr. F. Jenkinson.	Logie (Elgin); Crowborough (Sussex), etc.
C.G.L.	Mr. C. G. Lamb.	New Forest; Nethy Bridge (Inverness), etc.
C.M.	Mr. Claude Morley.	Suffolk.
A.P.	The late Mr. A. Piffard.	Felden (Herts).
D.S.	Dr. D. Sharp.	New Forest; Nethy Bridge, etc.
H.S.	Mr. Hugh Scott.	Henley-on-Thames.
G.H.V.	The late Mr. G. H. Verrall.	Newmarket (Suffolk), etc.
J.H.W.	Dr. J. H. Wood.	Herefordshire.
J.W.Y.	Lt.-Col. J. W. Yerbury.	Sutherland; Inverness; Cornwall, etc.

A considerable amount of new synonymy is given, mainly rendered necessary by the identification of a number of Walker's types in the British Museum collections. It is most unfortunate that under the existing rules some of these names have to take precedence over others which have been better founded and are in general use. Although no believer in the rigid application of the "rule of priority," which seems to me mainly to tend to put a premium on bad work, I have adopted these names for the sake of conformity to rules.

Certain other changes proposed by Coquillett and Johannsen have not been adopted in their entirety. Since Rondani was the first to divide Meigen's *Sciophila*, I have with great reluctance replaced *Lasiosoma* by *Sciophila*, and *Sciophila* by *Mycomyia*, though I cannot agree to spell this last name as Rondani did, "Mycomya." The replacing of *Anaclinia* by *Neuratelia*, Rond., seems to be wrong, for since Rondani included his genus in his section BB, "venae transversariae non adsunt vel inter primam et secundam longitudinales, vel inter secundam et tertiam," meaning that the subcostal cross-vein was absent, it is evident that he had wrongly identified Meigen's *Mycetophila nemoralis*, which has a subcostal cross-vein. Whether Rondani's *Neuratelia nemoralis* was a species of *Leia* or *Paraneurotelia* it is impossible to say, and therefore, fortunately, there is no excuse for not placing his genus on the scrap-heap.

According to the zoological rules in force at the time when Winnertz's monograph was published "when the evidence as to the *original* type of a genus is not perfectly clear and

indisputable, then the person who first *subdivides the genus* may affix the original name to any portion of it at his discretion, and no later author has a right to transfer that name to any other part of the original genus."\* Curtis specified *L. fascipennis* as the type of the genus *Leia*, but did not subdivide it; Rondani specified *L. bimaculata* as the type and renamed the genus *Lejomya*, but Winnertz was the person who first subdivided *Leia*, and his interpretation therefore takes precedence above all others. The attempt to use the name *Leia* in another sense arises entirely from a misinterpretation of the rule quoted through ignoring the word "original." Rondani's *Leiomya* (the corrected form of *Lejomya*) is evidently the same as Winnertz's *Glaphyroptera*, and so must be used, both because it is the older and because *Glaphyroptera* is preoccupied.†

Although these notes are far from complete, it is hoped that they will enable collectors roughly to place their specimens, and at least in the genera *Bolitophila*, *Macrocera*, *Platyura*, *Sciophila*, and *Mycetophila*, to determine them with some degree of accuracy. Certain species of these genera, and the majority of those in the other genera, can only be properly differentiated by a microscopic examination of the male hypopygium, and it is frequently necessary (particularly in the genus *Boletina*) to remove this organ and mount it in balsam (after clearing with potash) before its structure can be properly ascertained. The figures of hypopygia here given have been prepared from specimens mounted in small drops of stiff balsam, placed (without cover-slip) on small strips of transparent celluloid, which are kept on the same pin which bears the remainder of the insect.

The table of genera may be useful to those who do not possess Johannsen's monograph in the *Genera Insectorum*. In this key an attempt has been made to use only those characters which will group the genera according to natural relationships, but as Johannsen has suggested, it is highly probable that the *Mycetophilinae* is of polyphyletic origin and therefore in a strictly scientific arrangement should be divided into two or more groups or else united with the

\* Brit. Ass. Rept. 1842. p. 111. Although the wording of this rule was altered in 1905, the general sense remains the same and the words italicised here are still retained.

† This is not the case with *Leia*. The coleopterous genus of the same name was not published until 1821.

*Sciophilinae*; our knowledge, however, is not yet sufficiently advanced for this, though it seems probable that *Acnemia* may have arisen directly from *Monoclona*, and *Anaclinia* from *Polylepta*. In this key some new characters have been used, while others, such as the presence or absence of a subcostal cross-vein or a median ocellus, have been discarded as useless for separating genera, since they are not infrequently variable within the limits of a species. The Comstock-Needham nomenclature of venation has been adopted, and should readily be understood with the aid of the three figures of wings which are given. For the sake of convenience the genera are separately dealt with in the order in which they appear in Kertész's catalogue, but it may be pointed out that this is not entirely a natural arrangement; for example, there is, I feel convinced, only a superficial resemblance between the genera *Phronia* and *Erechia*; the former is closely allied to *Trichonta*, the latter to *Rhymosia*.

Several papers, containing figures of the hypopygia of very many of our species, have recently been issued, and the student of British *Mycetophilidae* will find these absolutely indispensable. The most important are as follows:—

- DZIEDZICKI, H. [On the genus *Mycetophila*, etc.] Pam. Fyzj., Warsaw, tom. iv, pp. 298–324, pls. v–ix (1884).  
[On *Boletina*, *Sciophila*, etc.] Pam. Fyzj., tom. v, pp. 164–194, pls. iv–ix (1885).  
Revue des espèces européennes du genre *Phronia*. . . .  
Horae Soc. Ent. Ross., 23, pp. 404–532, pls. xii–xxi (1889).  
Zur Monographie der Gattung *Rhymosia*, Winn. Horae Soc. Ent. Ross., 39, pp. 89–104, pls. i–vi (1910).
- LUNDSTRÖM, C. Neue oder wenig bekannte europäische Mycetophiliden. Ann. Mus. Nat. Hung., 1911, No. ix, and 1912, No. x.  
Beiträge zur Kenntniss der Dipteren Finlands. Acta Soc. pro Fauna et Flora Fennica, Helsingfors. Vol. 29, No. 1 (1906); vol. 32, No. 2 (1909); vol. 36, No. 1 (1912).
- LANDROCK, K. Neue oder seltene Mycetophiliden aus Mähren. Wien. Ent. Zeit. 1912, pp. 27–39.  
Neue oder wenig bekannte Pilzmücken. Wien. Ent. Zeit. 1912, pp. 175–185.

Zur Monographie der Gattung *Bolitophila*, Meig. Berl. Ent. Zeit. 1912, pp. 33-51.

In addition to these papers, some helpful notes on many of the British species have been given by JENKINSON (Ent. Mo. Mag., 1908, pp. 129-133, 151-154); reference to these will be made subsequently.

The following types of Walker's still exist in the British Museum, and have been determined by me as follows:—

<i>Symmerus ferrugineus.</i>	↘ <i>Plesiastina annulata</i> , Mg.
<i>Platyura vitripennis.</i>	↘ <i>Platyura semirufa</i> , Mg.
„ <i>mycetophiloides.</i>	„ <i>dorsalis</i> , Staeg.
„ <i>nigriceps.</i>	„ <i>nigriceps</i> , Winn.
„ <i>antica.</i>	„ <i>nigricornis</i> , F.
„ <i>conclisa.</i>	„ <i>zonata</i> , Zett.
„ <i>servula.</i>	<i>Helladepichoria servula.</i>
<i>Sciophila tenuis.</i>	<i>Sciophila apicalis</i> , Winn.
„ <i>maura.</i>	„ <i>lugubris</i> , Winn.
„ <i>compressa.</i>	<i>Tetragoneura sylvatica</i> , Curt.
„ <i>aliena.</i>	„ <i>hirta</i> , Winn.
„ <i>rufilatera.</i>	<i>Monoclona ? unicolorata</i> , Dz.
↘ <i>Boletina plana.</i>	<i>Boletina grzegorzekii</i> , Dz.
<i>Leptomorphus elongatus.</i>	↘ <i>Anachinia nemoralis</i> , Mg.
<i>Azana scatopsoides.</i>	↘ <i>Azana unomala</i> (Staeg.).
↘ <i>Leia basalis.</i>	<i>Docosia valida</i> , Winn.
„ <i>parallela.</i>	<i>Trichonta (?) atricauda</i> , Zett.
„ <i>defecta.</i>	↘ <i>Acnemiu nitidicollis</i> , Mg.
„ <i>pubescens.</i>	<i>Docosia valida</i> , Winn.
<i>Mycetophila binotata.</i>	<i>Zygomyia pictipennis</i> , Staeg.
„ <i>stolida.</i>	<i>M. stolida</i> , Winn.
„ <i>nigritula.</i>	<i>Zygomyia notata</i> , Stan.
„ <i>sobria</i> .*	↘ <i>Allodia crassicornis</i> , Stan.
„ <i>conformis</i> .†	<i>Phronia girschneri</i> , Dz.
„ <i>terminalis.</i>	<i>Trichonta funcbris</i> , Lundstr. (? Winn.).
„ <i>finalis.</i>	↘ <i>Empalia vitripennis</i> , Mg.
„ <i>longicornis.</i>	↘ <i>Allodia lugens</i> , Wied.
„ <i>leioides.</i>	<i>Phronia crassipes</i> , Winn.
„ <i>reciproca.</i>	<i>Dynatosoma nigricoxa</i> , Ztt.
„ <i>ocellus.</i>	<i>Mycothera dimidiata</i> , Staeg.
„ <i>flava.</i>	<i>Coelosia flava</i> , Staeg.

\* A second specimen is a female *Boletina* (? *inermis*, Lundstr.).

† A second specimen under the same name is *P. forcipata*, Winn.

The following species are among those wrongly identified by Walker, and should therefore be struck off the list, as they have not since been discovered in this country: Walker's

<i>Mycetophila paludosa</i>	was	<i>Zygomyia valida</i> .
„ <i>lutescens</i>	„	<i>M. rufescens</i> , Ztt.
„ <i>uninotata</i>	„	<i>M. linda</i> , Mg.
„ <i>maculosa</i>	„	<i>Rhymosia fenestralis</i> , Mg.
„ <i>sericea</i>	„	<i>Brachycampta ? caudata</i> , Winn.
„ <i>fuscata</i>	„	<i>Erechia ? lateralis</i> , Mg., and <i>Brachycampta</i> , sp.
„ <i>tarsata</i> .	„	<i>Phronia signata</i> and <i>Monoclona</i> <i>? halterata</i> .
<i>Platypura atrata</i> .	„	<i>P. semirufa</i> , Mg.

TABLE OF RECENT EUROPEAN GENERA OF MYCETOPHILIDAE.

[Genera which have not yet been found in Britain are enclosed in brackets. The dubious genera *Synapha*, *Agaromyia*, and *Piotepalpus* are omitted. The genera *Parastemma*, *Rutrophora*, *Telmaphilus*, *Brachycampta*, and *Mycothera* have been sunk as they appear to me to be insufficiently distinguished from *Megophthalmidia* (the first two), *Phronia*, *Allodia*, and *Mycetophila* respectively.]

1.  $Cu_1$  connected with M either by contact or by the M-Cu cross-vein . . . . . 2.
- $Cu_1$  and M not connected . . . . . 3.
2. Cross-vein R-M distinct . . . . . 4.
- Cross-vein R-M obliterated by the contact of  $R_8$  with M (*Ceroplastinae*) . . . . . 10.
3.  $R_{2+3}$  distinct, short, ending in  $R_1$  (*Sciophilinae*) . . . . 14.
- $R_{2+3}$  not separated from  $R_{1+5}$ , i.e.  $R_8$  unbranched (*Mycetophilinae*) . . . . . 28.
4.  $R_8$  branched . . . . . 5.
- $R_8$  unbranched (*Diadocidinae*) . . . . . DIADOCIDIA, Ruthe.
5. Cross-veins (R-M and M-Cu) close together; usually only one basal cell . . . . . 6.
- Cross-veins widely separated; two basal cells (*Bolitophilinae*) . . 7.
6.  $R_8$  with three branches (*Pachyneurinae*) [PACHYNEURA, Zett.].
- $R_8$  with two branches,  $R_{2+3}$  and  $R_{1+5}$  (*Mycetobiinae*) . . . . 8.

BOLITOPHILINAE.

7. Antennae 17 jointed, slender . . . . . BOLITOPHILA, Mg.
- Antennae 12 jointed . . . . . [HESPERINUS, Walk.].

## MYCETOBINAE.

8. Sc<sub>1</sub> long, ending in costa . . . . . MYCETOBIA, Mg.  
 Sc<sub>1</sub> very short, not reaching costa . . . . . 9.  
 9. R<sub>s</sub> forks before base of fork of M . . . . . DITOMYIA, Winn.  
 R<sub>s</sub> forks beyond base of fork of M . . . . . SYMMERUS, Wlk.

## CEROPLATINAE.\*

10. Antennae at least as long as the whole body . . . . . MACROCERA, Mg.  
 Antennae much shorter, usually not longer than the head and  
 thorax . . . . . 11.  
 11. Proboscis produced (as long as the head or longer) . . . . . 12.  
 Proboscis not distinctly produced . . . . . 13  
 12. Sc rather long, reaching costa; first joint of palpi roundish  
 . . . . . ASINDULUM, Ltr.  
 Sc short, not reaching costa; first joint of palpi much elongated  
 . . . . . HELLADEPICHORIA, Beck.  
 13. Antennae flattened; palpi very short and thick  
 . . . . . CEROPLATUS, Bosc.  
 Antennae not or scarcely flattened; palpi rather long and thin  
 . . . . . PLATYURA, Mg.

## SCIOPHILINAE.

14. Lateral ocelli contiguous with the eye margins  
 . . . . . [EUDICRANA, Lw.].  
 Lateral ocelli remote from the eye margins . . . . . 15.  
 15. Wings, at least towards the apex, with a distinct though short  
 pubescence . . . . . 16.  
 Pubescence of wings microscopic . . . . . 0  
 16. Cu not forked . . . . . MONOCLONA, Mik.  
 Cu forked as usual . . . . . 17.  
 17. M forks at or scarcely beyond cross-vein R-M, *i. e.* upper fork  
 almost or quite sessile . . . . . SCIOPHILA, Mg. (*Lasiozona*, Winn.).  
 M forks far beyond cross-vein R-M . . . . . 18.  
 18. Cell R<sub>1</sub> (the Sciophiline cell) large; wings hairy only towards  
 apex . . . . . PARATINIA, Mik.  
 Cell R<sub>1</sub> very small; wing pubescence very short but uniform 19.  
 19. R<sub>4+5</sub> wavy; Cu forks beyond the cross-vein R-M  
 . . . . . POLYLEPTA, Winn.  
 R<sub>4+5</sub> straight; Cu forks below the cross-vein R-M  
 . . . . . LOEWIELLA, Meun.  
 20. Cross-vein R-M very long and almost horizontal. . . . . 21.  
 Cross-vein R-M moderately short and very far from hori-  
 zontal . . . . . 22.

\* Including *Macrocerinae*.

21. Cu forks close to base of wing . . . . . EXTREPESTHONEURA, End.  
 Cu forks beyond cross-vein R-M . . . . . TETRAGONEURA, Winn.
22. Costa not reaching beyond tip of  $R_{4+5}$   
 MYCOMYIA, Rnd. (*Sciophila*, Winn.).  
 Costa extending at least slightly beyond tip of  $R_{4+5}$  . . . . . 23.
23.  $Sc_1$  ends in  $R_1$  . . . . . 24.  
 $Sc_1$  ends in costa . . . . . 25.
24. Proboscis produced, nearly as long as the head  
 [HADRONEURA, Lundstr.].  
 Proboscis not produced . . . . . DZIEDZICKIA, Joh.
25.  $Sc_2$  (subcostal cross-vein) absent . . . . . APOLIPHITHISA, Grzeg.  
 $Sc_2$  present . . . . . 26.
26. Cu forks under slightly before base of fork of M; wings clear  
 EMPALIA, Winn.  
 Cu forks considerably before fork of M . . . . . 27.
27.  $Sc_2$  before base of  $R_s$ ; wings not banded  
 [PALAEOEMPALIA, Meun.].  
 $Sc_2$  above or beyond base of  $R_s$ ; wings banded  
 NEOEMPHERIA, O.-S.

MYCETOPHILINAE.

28. Lateral ocelli remote from the eye margins . . . . . 29.  
 Lateral ocelli contiguous with the eye margins or nearly so . . . . . 44.
29. Cu simple, not forked . . . . . 30.  
 Cu forked . . . . . 31.
30.  $Sc_1$  long and distinct; M forked . . . . . ACNEMIA, Winn.  
 $Sc_1$  very short; M simple . . . . . AZANA, Wlk.
31.  $Sc_1$  long . . . . . 32.  
 $Sc_1$  short, not reaching costa . . . . . 43.
32.  $Sc_1$  terminating in  $R_1$  . . . . . SYSTEMNA, Winn.  
 $Sc_1$  terminating in the costa . . . . . 33.
33. Proboscis very much elongated . . . . . GNORISTE, Mg.  
 Proboscis shorter than the head if produced at all . . . . . 34.
34. Wings with a distinct short pubescence (compare also  
*Phthinia*) . . . . . 35.  
 Wings with only microscopic pubescence . . . . . 38.
35.  $M_1$  almost or quite complete; wings marked . . . . . 36.  
 $M_1$  obviously defective at the base; wings unmarked . . . . . 37.
36.  $Sc_2$  placed rather near tip of  $Sc_1$ ; large species  
 LEPTOMORPHUS, Curt.  
 $Sc_2$  placed before middle of  $Sc_1$ ; rather small species  
 ALLOCOTOCERA, Mik.
37. Costa produced only slightly beyond tip of  $R_{4+5}$   
 ANACLINIA, Winn.



- Costa produced much beyond tip of  $R_{4+5}$   
 PARANEUROTETIA, Landr.
38. Cu forks under or beyond the R-M cross-vein; tibial setae weak. . . . . 39.  
 Cu forks considerably before the R-M cross-vein; tibial setae strong . . . . . 42.
39. Base of fork of Cu below or before that of M . . . . . 40.  
 Base of fork of Cu much beyond that of M . . . . . 41.
40.  $Sc_2$  (when present) placed near middle of  $Sc_1$  BOLETINA, Mg.  
 $Sc_2$  placed near tip of  $Sc_1$  . . . EMPALIA, Winn. (part).
41. Front metatarsus much longer than the tibia;  $Cu_2$  wavy  
 PITHINIA, Winn.  
 Front metatarsus scarcely as long as the tibia; Cu- not wavy  
 COELOSIA, Winn.
42.  $M_1$  and  $Cu_1$  both interrupted at base; costa exceeding  $R_8$   
 LEIA, Mg.  
 $M_1$  not interrupted at base; costa not exceeding apex of  $R_8$   
 LEIOMYIA, Rnd. (*Glaphyoptera*, Winn.).
43. Base of fork of Cu nearer base of wing than that of M  
 MEGOPITHALMIDIA, Dz.\*
44. Cu simple . . . . . 58.  
 Cu branched . . . . . 45.
45. Second joint of palpi greatly enlarged (first minute)  
 CORDYLA, Mg.  
 Second joint of palpi not conspicuously enlarged . . . . . 46.
46. Costa extending distinctly beyond the tip of  $R_8$  . . . . . 47.  
 Costa not extending beyond the tip of  $R_8$  . . . . . 51.
47. Bases of forks of M and Cu about level . . . . . 48.  
 Base of fork of Cu distinctly nearer apex of wing than that of M . . . . . 49.
48.  $Sc_1$  long; axillary vein wanting . . . . . DOCOSIA, Winn.  
 $Sc_1$  short; axillary vein distinct . . . . . EPICYPTA, Winn.
49. Fork of Cu much shorter than that of M . . . . . 50.  
 Fork of Cu only a little shorter than that of M  
 ANATELLA, Winn.
50. Costa only slightly produced beyond tip of  $R_8$ ; anal vein weak  
 PHRONIA, Winn.  
 Costa considerably produced beyond tip of  $R_8$ ; anal vein strong  
 [MACROBRACHIUS, Dz.].
51.  $Sc_1$  reaching beyond middle of basal cell and (except in *T. submaculata*) ending in  $R_1$  . . . . . TRICHONTA, Winn.

\* Including *Parastemma* and *Rutrophora*.

- Sc<sub>1</sub> not reaching middle of basal cell or if rather longer not ending in R<sub>1</sub> . . . . . 52.
52. Cu<sub>1</sub> and Cu<sub>2</sub> obviously divergent in their terminal portions; tibial setae nearly always weak; wings generally unmarked . . . . . 53.
- Cu<sub>1</sub> and Cu<sub>2</sub> parallel or slightly convergent in their terminal portions; tibial setae strong and conspicuous; wings nearly always spotted . . . . . 59.
53. Base of fork of Cu nearer apex of wing than that of M; tibial setae always weak . . . . . 54.
- Base of fork of Cu nearer base of wing than that of M; if not, then with strong tibial setae . . . . . 55.
54. R<sub>1</sub> slightly indented at origin of R<sub>2</sub>; M forks beyond origin of R<sub>2</sub>  
PIRONIA, Winn.\*
- R<sub>1</sub> straight except towards tip; M forks before origin of R<sub>2</sub>  
EXECHIA, Winn.
55. Anal vein long and conspicuous . . . . . 56.
- Anal vein short and inconspicuous or altogether wanting . . . . . 57.
56. Base of fork of Cu nearer apex of wing than that of M; tibial setae strong; wings with dark clouds DYNATOSOMA, Winn.
- Base of fork of Cu nearer base of wing than that of M; tibial setae weak; wings unmarked . . . . . RHYMOSIA, Winn.
57. A very long vein-like fold simulating the anal vein, lying close up against Cu and extending nearly to the middle of the fork  
BRACHYPEZA, Winn.
- This fold if present at all is very much shorter ALLODIA, Winn.†
58. R<sub>1</sub> and R<sub>2</sub> closely approximated to one another and to the costa  
SCEPTONIA, Winn.
- R<sub>1</sub> and R<sub>2</sub> not closely approximated to one another or to the costa  
ZYGOMYIA, Winn.
59. Male genitalia not enlarged; female without distinct setae on the ventral side of the sixth abdominal segment  
MYCETOPHILA, Mg.‡
- Male genitalia very large; female with a few setae on the ventral side of the sixth abdominal segment  
OPISTHOLOBA, Mik

BOLITOPHILA, Mg.

1. R<sub>2+3</sub> ending in the costa . . . . . 2.
- R<sub>2+3</sub> ending in R<sub>1</sub> . . . . . 5.

\* Including *Telmaphilus*, Beck.

† Including *Brachycampa*, Winn.

‡ Including *Mycothera*, Winn.

2.  $Cu_1$  ending in tip of  $Cu_2$  . . . . . *occlusa*, sp. n.  
 $Cu_1$  ending in the hind margin remote from tip of  $Cu_2$  . . . . . 3.
3. Thorax with three shining blackish stripes;  $Cu_1$  and  $Cu_2$  considerably approximated at their tips . . . . . *glabrata*, Lw.  
 Thorax dull brownish, striped or almost unicolorous;  $Cu_1$  and  $Cu_2$  very little approximated . . . . . 4.
4. Wings with two distinct dark spots. . . . . *bimaculata*, Zett.  
 Wings not distinctly spotted  
*hybrida*, Mg.; *pseudohybrida*, Landr.
5. Cross-vein M-Cu obliterated by contact of  $Cu_1$  with M  
*tenella*, Winn.  
 Cross-vein M-Cu not obliterated . . . . . 6.
6. Male antennae long, clothed with long hair . . . . . *saundersi*, Curt.  
 Male antennae shorter, clothed with short hair . . . . . *cinerea*, Mg.

\**B. occlusa*, sp. n.

*Fusca*; *vena brachiali in costam exeunte: cellula posteriori quinta (Cu<sup>2</sup>) apice occlusa.*

♂. Dingy brownish; thorax more ochreous with three dark brown stripes. Antennae short haired, shorter than the whole body, with the first three joints yellowish. Legs dingy ochreous, tarsi dark, trochanters and knees black. Wings transparent, only the stigma darker;  $R_{2+3}$  ends in the costa close to the tip of  $R_1$ ; cross-vein M-Cu absent as in *B. tenella*;  $Cu_2$  terminating in the tip of A. Genitalia, fig. 1. Length about 6 mm.

One male from Brockenhurst, Hants, 22. v. 1910 (*Lt.-Col. Yerbury*). Type in Mr. Collin's collection.

\**B. bimaculata*, Zett. Logie (F.J.); Nethy Bridge (C.G.L.); New Forest (D.S.); Stoke Wood, Hereford (J.H.W.); Aviemore (J.W.Y.).

\**B. glabrata*, Lw. A single specimen, much damaged, from Blythburgh, Suffolk (C.M.); Wells, Somerset, 1 ♂ (C.G.L.); New Forest, 1 ♀ (D.S.). The shining thorax and distinctive neuration render its identification certain. It seems to be very rare on the Continent.

*B. hybrida*, Mg. This is the species generally known as *B. fusca*, Mg. It is not uncommon.

\**B. pseudohybrida*, Landrock. Cambridge (F.J., D.S.)

*B. tenella*, Winn. Of this rare species I have seen only one male in Mr. Collin's collection and one female from Aviemore (J.W.Y.). As in *B. hybrida*, Mg. and *B.*

*pseudohybrida*, Landr., the middle joints of the front tarsi of the female are distinctly thickened.

*B. saundersii*, Curt. This species has been erroneously referred to as synonymous with *B. hybrida* (= *fusca*), even Landrock in his recent monograph of the genus assigning that position to it. In reality it belongs to the *cinerea* group, and differs from *B. cinerea* in the long hairs of the male antennae and in the genitalia of the male. It is a fairly common species. Hypopygium, fig. 2.

*B. cinerea*, Mg. Mr. A. E. Cameron, of Manchester University, has sent me larvae of this species from Manchester and from Delamere Forest. In the latter case they were feeding on a decaying *Agaricus*; "the larvae pupated Nov. 29th and following days, and the imago began to emerge December 3rd."

#### MACROCERA, Mg.

1. Wings microscopically pubescent . . . . . 2.  
    Wings distinctly pubescent when viewed through a lens . . . . . 8.
2. Wings quite unspotted . . . . . 3.  
    Wings with at least a central dark spot . . . . . 5.
3. Hind margins of abdominal segments conspicuously lighter than the basal portions.  
    Hind margins of abdominal segments not lighter than the basal portions . . . . . *lutea*, Mg.
4. Large species; hind coxae with a dark spot; antennae somewhat thickened at the base . . . . . *fasciata*, Mg.  
    Small species; hind coxae without dark spot; antennae not thickened. . . . . *pusilla*, Mg.
5. Wings with dark central markings only . . . . . 6.  
    Wings with dark central markings and a dark apex . . . . . 7.
6. Wings with a small central spot only; resembles *M. fasciata grandis*, Lundstr.  
    Wings with a central fascia which reaches the costa . . . . . *centralis*, Mg.
7. Thorax with two black stripes; central fascia interrupted and not nearly reaching  $R_{2+3}$  . . . . . *maculata*, Mg.  
    Thorax all yellowish; central fascia irregular but uninterrupted and reaching  $R_{2+3}$  . . . . . *angulata*, Mg.
8. Wings with a dark central fascia and dark apex . . . . . *phalerata*, Mg.  
    Wings without distinct dark markings except at the tip of  $R_1$  . . . . . *stigma*, Curt.

*M. crassicornis*, Winn. I cannot see how to distinguish this from *M. fasciata*, Mg., and consider that there is only one rather variable species. *M. annulicoxa*, Mik, is evidently a synonym of *M. crassicornis*, Winn.

*M. villata* of the List (and probably of Meigen) is, I feel sure, only a variety of the female of *M. lutea*.

*M. pusilla*, Mg. Dingwall (May 1911) and Loch Assynt (June 1911—J.W.Y.). These specimens perhaps represent the true *M. pusilla*. The *M. pusilla* of our list is apparently an undescribed species, but the material is too poor and scanty to describe.

*M. maculata*, Mg. This very distinct species, though previously recorded as British, was omitted from the List of 1901. The British Museum possesses three specimens from Felden, Herts (A. Piffard). It resembles *M. phalerata*, but has bare wings, and two blackish marks on the posterior portion of the mesonotum. The latter character, together with the different wing-markings, will also serve to distinguish it from *M. angulata*.

\**M. grandis*, Lundstr. Bowness, Westmoreland (G.H.V.).

#### CEROPLATUS, Bosc.

\**C. testaceus*, Dalm. This species has been bred in the New Forest by Dr. Sharp in some numbers, and some have been collected in the same locality by Mr. F. C. Adams. It is in the British List as *C. tipuloides*, Bosc.

The species was at first thought to be undescribed, and figures of the wing and male genitalia were accordingly prepared (figs. 3 and 4), but I am now convinced that it is *C. testaceus*. Dalman described the antennae as 15-jointed, but he regarded the first joint as an articuliform process, and evidently overlooked the minute round terminal (17th) joint. There is no other disagreement between our specimens and the description (*Analecta Ent.*, p. 98). The author described the scutellum as pale testaceous; it is usually darker in the middle. It is doubtful, however, whether Zetterstedt had identified the species correctly.

*C. lineatus*, F. New Forest (D.S.); Monk's Soham, Suffolk (C.M.); Cambridge (F.J.); Mordiford, Hereford (J.H.W.) The genus *Cerotelion*, Rnd., has been used for this species, but it seems inadvisable to separate it from *Ceroplatus*, since *C. sesioides* (as described by Winnertz)

exhibits an intermediate venation, while in all other characters the species are essentially similar.

PLATYURA, Mg.

I have devoted considerable attention to this genus, having examined fully 300 British specimens in all, a large number considering the rarity of most of the species. There were 18 species represented; I give figures of the hypopygia of all these, except *P. nigriceps*, Wlk., the male of which is unknown to me. Dr. H. Dziedzicki very kindly examined some of my drawings, and informs me that those of *P. marginata*, *modesta*, *infusca*, *fasciata*, *unicolor*, *semirufa*, and *nemoralis* correspond with Winnertz's specimens which he has examined.

There should be little difficulty about determining British specimens of *Platyura* by the following table:—

1.  $R_{2+3}$  ending in  $R_1$  (*Apemon*, Joh.), . . . . . *marginata*, Mg.  
 $R_{2+3}$  ending in costa . . . . . 2.
2. Anal vein reaching hind margin . . . . . 3.  
 Anal vein not reaching hind margin . . . . . 10.
3. Male antennae almost twice as long as head and thorax together;  
 front tibiae and metatarsi equal in length *macrocera*, sp. n.  
 Male antennae about as long as head and thorax together;  
 front tibiae longer than the metatarsi . . . . . 4.
4. Wings with an obvious dark tip and a dark cloud on  $Cu_2$   
*biunbrata*, sp. n.  
 Wings quite unmarked, or with a small inconspicuous dark  
 apical spot . . . . . 5.
5. Tip of  $Sc$  well before base of  $R_s$ ; small yellow species . . . . . 6.  
 Tip of  $Sc$  level with or beyond base of  $R_s$ ; larger species . . . . . 8.
6. Last two segments of male abdomen black *nigricauda*, Strobl.  
 Last two segments of male abdomen yellow . . . . . 7.
7. Tip of male wing with a small faint greyish spot (female wing  
 clear) . . . . . *flava*, Meq.  
 Wing of male quite clear . . . . . *modesta*, Winn.
8. Thorax black with yellow shoulders (normally)  
*dorsalis*, Staeg., Wlk.  
 Thorax yellowish, with or without dark stripes . . . . . 9.
9. Thorax clear yellowish; wings with a small grey spot at tip  
*nigriceps*, Wlk.  
 Thorax with three dark stripes; wings quite clear  
*dorsalis*, Staeg., var.; *utriceps*, sp. n.

10. Anal vein strong, almost reaching the hind margin; rather large species usually with an entirely shining black thorax; tip of costa scarcely extending beyond  $R_{4+5}$  . . . *semirufa*, Mg.  
 Anal vein weaker; usually disappearing much before the hind margin; if with a black thorax, then small species; costa distinctly produced beyond tip of  $R_{4+5}$  . . . . . 11.
11. Front tibiae distinctly longer than the metatarsi; thorax black . . . . . 12  
 Front tibiae at most as long as the metatarsi; thorax yellow or with yellow ground colour . . . . . 14.
12. Wings with the apex broadly though sometimes faintly darkened  
*nemorialis*, Mg.  
 Wings clear . . . . . 13.
13. Abdominal segments 2-4 pale at the apex;  $R_{2+3}$  rather long and slanting . . . . . *zonata*, Zett.  
 Abdominal segments 2-4 pale at the base;  $R_{2+3}$  short and almost vertical . . . . . *perpusilla*, sp. n.
14. Third and fourth costal divisions about equal; wings almost or quite clear . . . . . *aestivalis*, Winn.  
 Third costal division considerably shorter than the fourth. 15.
15. Wings almost unmarked; costa extending half the distance between the tips of  $R_{4+5}$  and  $M_{1+2}$  . . . . . *pectinifera*, sp. n.  
 Wings with a dark fascia before the apex; costa extending at most one-third of the distance between the tips of  $R_{4+5}$  and  $M_{1+2}$ . . . . . 16.
16. Abdomen mainly or entirely black; thorax of male with three large confluent shining black stripes . . . . . *nigricornis*, F.  
 Abdomen largely or mainly reddish yellow; thorax reddish yellow in both sexes . . . . . 17.
17. Inner edge of wing-fascia protuberant between  $R_{4+5}$  and  $M_{1+2}$  . . . . . *fasciata*, Mg.  
 Inner edge of wing-fascia indented between  $R_{4+5}$  and  $M_{1+2}$  . . . . . *unicolor*, Staeg.

*P. marginata*, Mg. Enderlein (Stett. ent. Zeit. 1911, p. 163) introduces the genus *Paraplatyura* for this species, basing it on the neurulation, but since Loew's *P. occlusa* exhibits an intermediate structure, the separation of this species from *Platyura* seems undesirable. Enderlein places it in the Sciophilinae, obviously an error. In any case *Paraplatyura* would be antedated by *Apemon*, Johannsen (Gen. Ins. 1909, p. 20). *P. marginata* has the faint fold-like basal extension of the media and the absence of bristles on the whole body characteristic of *Apemon*, but some other

species, e.g. *P. semirufa* and *P. nigricornis*, have practically no bristles except on the coxae. *Apemon* is therefore not adopted in this paper. As Strobl suggests, *P. marginata* is very likely only a variety of *P. atrata*; I am unable to confirm the latter as British, unless this is the case. Hypopygium, fig. 5.

\**P. macrocera*, sp. n. ♂.

*Fusca*; *antennis thorace cum capite duplo longioribus*; *alis subinfuscatis, immaculatis*; *vena anali marginem attingente*.

Head and thorax blackish-brown, somewhat shining; small yellowish shoulder-patches in front of the mesonotum. Abdomen, including hypopygium, dark brown. The abdomen is unusually long and thin, for a *Platyura*, and the hypopygium (figs. 7 and 8) has a quite unusual structure. Antennae, palpi and legs, dark brown, femora somewhat lighter; front tibiae and metatarsi equal in length. Antennae twice the length of the head and thorax together. Wings (fig. 8a) somewhat infuscated, but quite unmarked. Halteres long, whitish, knob small, black. Length (without antennae) 5 mm.

Two males of this interesting species were taken at Aviemore, Inverness, by Lt.-Col. Yerbury, on August 10th, 1911, and presented by him to the British Museum. Another male was taken by the same collector at Nethy Bridge, 19. vii. 1905, and is in Mr. Collin's collection. The species is sufficiently distinguished from all the other members of the genus by the long antennae, suggesting *Macrocera*. In fact, it is difficult to decide in which of the two genera the species should be placed, though on the whole it would seem to go better in *Platyura*, on account of the venation, which bears a close resemblance to that of *P. flava* and *P. nigricauda*.

\**P. biumbata*, sp. n.

*Fusca*; *thorace flavo brunneo-trivittato*; *abdominis incisuris, coxis, pedibus, halteribusque flavis*; *alis apice fuscis, umbraque fusca in vena postica*; *vena anali marginem posteriorem attingente*.

♂, *Head* black above, front yellowish; palpi dark brown; antennae black, the two basal joints yellowish. *Thorax* dingy yellowish, with three separate dark brown stripes. *Abdomen* dark brown, the posterior borders of segments 1-5 yellowish. Hypopygium as in fig. 9. *Legs* yellow tarsi and tibial spurs dark; front



tibiae about one-fifth longer than the metatarsi. *Wings* with the apex dark, and with a dark cloud along  $Cu_2$ . Tip of Sc immediately above base of  $R_3$ ; third costal division scarcely one-third as long as fourth;  $R_{2+3}$  moderately long, at an angle of  $45^\circ$  with  $R_{4+5}$ ; costa extending nearly half the distance between the tips of  $R_{4+5}$  and  $M_{1+2}$ ; anal vein reaching margin.

2 ♂. Padstow, Cornwall, Sept. 1903 (*C. G. Lamb*—type in British Museum; para-type in Cambridge Museum); 1 ♂ Studland, Dorset, 11. viii. 1909 (*Lt.-Col. Yerbury*), in Mr. Collin's collection.

*P. nigricauda*, Strobl. Crowborough (F.J.); New Forest (D.S.); Felden (A.P.); Porthewall (J.W.Y.). Males only. Hypopygium, figs. 10 and 11.

\**P. flava*, Mcq. This is the species recorded by Verrall as *P. modesta*, Winn. Crowborough (F.J.); New Forest (D.S.); Stokenchurch (J.W.Y.); King's Lynn (E.A.A.). The male has a small greyish costal spot at the apex of the wing, resembling in this respect *P. dorsalis* and *P. nigriceps*. Hypopygium, figs. 12 and 13.

*P. modesta*, Winn. (= *simplex*, Grz.). Studland (J.W.Y.); Tangham Wood (G.H.V.). I have only seen two males of this species, both in Mr. Collin's collection. Hypopygium, figs. 14 and 15.

*P. dorsalis*, Staeg. (= *mycetophiloides*, Wlk., = *humeralis*, Winn.). King's Lynn (E.A.A.); New Forest (D.S.); Nairn and Aviemore (J.W.Y.); Studland (J.E.C.). Hypopygium, figs. 16 and 17.

*P. nigriceps*, Wlk. I have only seen two recent examples, a female from Carrow, Norwich (F.J.) and one from Aviemore (J.W.Y.). Two of Walker's original specimens are in the British Museum, both females. The Aviemore specimen has indications of three darker stripes on the thorax. I have rather a strong suspicion that *P. nigriceps* may be only the female of *P. dorsalis* as the only differences seem to be coloration, and equally marked differences are known to occur between the sexes of *P. nigricornis*.

\**P. atriceps*, sp. n.

♂. *Flava*; capite nigro, thorace brunneo-trivittato, tarsis antennarumque flagello fuscis; alis flavescentibus, vena anali marginem attingente.

Head black; palpi and three basal joints of antennae reddish-yellow, rest of antennae dark brown. Thorax yellowish with three

brown not confluent stripes; metanotum dark brown. *Abdomen* yellowish, the last segment and the genitalia (figs. 18 and 19) dark brown. *Legs* yellow, tarsi and tibial spurs dark brown. Front tibiae longer than the metatarsi. *Wings* quite unmarked, slightly yellowish tinged; halteres yellow. Apex of Sc opposite base of  $R_8$ ;  $R_{2+3}$  long, at an angle of  $45^\circ$  with  $R_{4+5}$ ; distance between tips of  $R_1$  and  $R_{2+3}$  less than half that between tips of  $R_{2+3}$  and  $R_{4+5}$ ; costa just reaching tip of wing and extending nearly half the distance between tips of  $R_{4+5}$  and  $M_{1+2}$ . Anal vein strong, reaching hind margin.

One male from Goathorn, Dorset, 7. vi. 1907 (*Lt.-Col. Yerbury*). Type in Mr. Collin's collection. This may be the species described by Winnertz as *P. nigriceps*, but it differs from Walker's type in the venation (Sc is shorter and costa longer), in the absence of the dark spot at the apex of the wing, and in the striped thorax.

*P. semirufa*, Mg. This is a common and very variable species, and seems to have been described under a variety of names. I have seen several varieties which at first sight appear quite distinct, but as they all have identical genitalia (fig. 6), and differ only in colour, I regard them all as one species:

(a) Thorax and abdomen entirely black. This is the commonest form; the male has apparently been described by Van der Wulp as *P. concolor*, and is certainly Walker's *P. vitripennis*. The female of this form (of the others I only know the male) has the wings rather deeply brownish-tinged, especially on the margins, being darkest on the anterior margin of the apical half. Females of this form have been described by Meigen as *P. baumhaueri*, by Staeger as *P. brunnipeennis* and by Walker as *P. unicolor*. (Meigen's *P. baumhaueri*, indeed, was described as  $2\frac{1}{2}$  lines long, while the usual size is 4 lines, but this discrepancy signifies little, as the species varies greatly in this respect.)

(b) Head and thorax black, abdomen red except at base and apex. *P. semirufa*, Mg., and probably *P. erythrogaster*, Mg., belong here. This form is also common.

(c) Thorax dark reddish brown with two black stripes, abdomen reddish. 1 ♂, Crowborough (F.J.). Winnertz's *P. taeniata* perhaps belongs here.

(d) Like var. *a*, but a distinct dark fascia before the tip of the wing. Wells, Somerset (C.G.L.); Tram Inn, Herefordshire (J.W.Y.); Tarrington (J.H.W.). *P. fulvipes*,

*P. nemoralis*, Mg., probably, and *P. morio*, Grz., certainly belong here. In all these forms the strong anal vein almost reaches the hind margin.

*P. nemoralis*, Mg. (probably = *flavipes*, Mg., Curt., Ztt., = *nana*, Winn., = *cincta*, Winn.). The commonest species of the genus in this country. It is so variable in size and in the amount of yellow (if any) on the abdomen, that I feel confident that the same species has been described under these various names. I have mounted the genitalia of a number of different-looking specimens and find them constant (figs. 20 and 21).

\**P. zonata*, Zett. (= *concosa*, Wlk., = *forcipula*, Lundstr.) Crowborough (F.J.); New Forest (D.S.); East Leigh (G.H.V.). Walker's type is in quite good condition, and answers quite closely to Zetterstedt's description of *P. zonata*. This may be the species described by Winnertz as *P. succincta*, Mg., but as it only occasionally has the margin of the wing slightly darker, and as the male claspers are not oval, I have preferred to call it *P. zonata*. Hypopygium, fig. 22.

\**P. perpusilla*, sp. n.

*Minuta*; *thorace nigro*; *coxis, pedibus, halteribusque ochraceis, tarsis abdomineque fuscis*; *alis subhyalinis, vena anali marginem posteriorem non attingente*.

♂. *Head* including whole antennae blackish; palpi dark brown. *Thorax* black, rather shining, clothed with strong black bristles. *Abdomen* mainly blackish-brown, segments 2, 3 and 4 rather broadly yellowish at the base. Genitalia, fig. 23. *Legs*: Coxae, femora and tibiae light yellow, tarsi and tibial spurs dark; front tibiae considerably longer than the metatarsi. *Wings* hyaline, unmarked. Tip of  $Sc_1$  immediately above base of  $R_3$ ;  $R_{2+3}$  very short, straight, considerably beyond tip of  $R_1$ , the distance between the tips of  $R_1$  and  $R_{2+3}$  being about two-thirds of that between the tips of  $R_{2+3}$  and  $R_{4+5}$ ;  $R_{1+5}$  entering costa at a very low angle; the costa does not reach the tip of the wing, but extends nearly half the distance between the tips of  $R_{1+5}$  and  $M_{1+2}$ . Anal vein very much abbreviated. Length 2.5 mm.

One male from Boyton, Suffolk, 19. vii. 1908 (G. H. Verrall). Type in Mr. Collin's collection.

\**P. aestivalis*, Winn. What I take to be this species is represented by a short series from the New Forest (D.S.) and one male from Studland (J.W.Y.). In most specimens

the thorax is uniformly yellowish, but in the one from Studland it has three brown stripes, while in another it is entirely dark brown; this last specimen has the wing darkened at the tip and along the hind margin. Hypopygium. figs. 24 and 25.

\**P. pectinifera*, sp. n.

♂. *Ochracea*; *alis subhyalinis, macula parva apicali grisea; vena anali marginem vix attingen'te.*

Head blackish; palpi yellow; antennae dark brown. *Thorax* reddish-ochreous. *Abdomen* discoloured but apparently in life it must have been entirely ochreous. Genitalia as in figs. 26 and 27. *Legs* yellowish; tarsi and tibial spurs dark. Front tibiae hardly as long as the metatarsi. *Wings* slightly yellowish-tinged; a small dark apical spot on the costa. Tip of Sc immediately above base of  $R_s$ ; third costal division about three-quarters as long as fourth;  $R_{2+3}$  long, at an angle of about  $45^\circ$  with  $R_{4+5}$ ; costa extending half the distance between the tips of  $R_{4+5}$  and  $M_{1+2}$ ; anal vein distinct, almost reaching margin. Length about 4 mm.

1 ♂. New Forest, vii. 1905 (*D. Sharp*). The general aspect of this species is extremely like *P. flava*, from which it appears to be distinguished by the shortened anal vein. The name is suggested by the comb like appendage of the hypopygium. *P. ochracea*, Mg., is also similar but is larger, and there are several differences in venation.

\**P. nigricornis*, F. (= *nigriventris*, Ztt., = *antica*, Wlk., = *infusata*, Winn.). New Forest (D.S., F.J.); Monkswood (D.S.); Crowborough, Cambridge (F.J.). I have little hesitation in adopting Fabricius' name for this species. He describes the abdomen of the female as having the borders of the segments yellowish; this is often the case, though typically the female abdomen is entirely black. The thorax of the female generally has more or less distinct indications of three darker stripes. Hypopygium. figs. 28 and 29.

*P. fasciata*, Mg. The hypopygium (figs. 30 and 31) seems to be indistinguishable from that of Lundström's *P. tristis*, and his species is therefore very likely a dark variety of *P. fasciata*. The latter is not uncommon with us.

\**P. unicolor*, Staeg. Apparently not at all uncommon. Logie, Cambridge, Crowborough (F.J.); New Forest (D.S.); Clacton-on-Sea (J.W.Y.). This species might be

confused with *P. fasciata*, as the abdomen, though usually more or less unicolorous, is apt (especially in the female) to develop dark bands. The two can most readily be distinguished by the character given in the key; in addition, *P. unicolor* is usually smaller. Hypopygium, figs. 32 and 33.

\*HELLADEPICHORIA, Beck.

*H. servula*, Wlk. (*Platyura servula*, Wlk.). This is the species referred to by Jenkinson as "the dark species of *Asindulum* which is as common as *A. flavum*." It is common in the New Forest (F.J., D.S., C.G.L., F.C.A.) and specimens have also been taken at Whittlesford, Cambs. (C.G.L.) and Crowborough (F.J.).

The thorax is blackish-brown rather than ferruginous, as Walker described it; the type is in fairly good condition, so that the identification is certain. The proboscis is about the same length as in *Asindulum rostratum*, but much more slender; the anal vein is very short; the subcostal cross-vein is present though very difficult to make out. Loew's short description of *Asindulum geranias* applies in most respects to this species, but he states that the anal vein is not very much shortened. Becker's *H. tenuipes*, the type of the genus, must be extremely similar, the only discrepancy I can find between our insect and his being the statement that the proboscis is as long as the middle tibiae, while in *H. servula* it is considerably shorter; but for this I should have regarded *H. tenuipes* as a synonym. Head, fig. 34; hypopygium, fig. 35.

The genera *Asindulum* and *Helladepichoria*, though very similar, must, I consider, be kept distinct, as they apparently represent separate developments from two different groups of *Platyura*. This is strongly indicated by a study of the hypopygia; that of *H. servula* is of a type similar to *P. bimbrata*, while those of the other species appear to show more affinity with the *P. dorsalis* group.

ASINDULUM, Latr.

\**A. rostratum*, Zett. This is the species which is in the List as *A. flavum*; Dr. Lundström has confirmed my identification by examining a specimen. The true *A. flavum* (which I have not seen) has a much longer proboscis. Head, fig. 36; hypopygium, figs. 37 and 38.

\**A. nigrum*, Latr. Mildenhall, Suffolk (D.S.). These specimens are somewhat larger and have the dark apex of the wing more extended than in *A. femorale*, but otherwise agree rather closely. Latreille's description is of course inadequate, but the determination seems probably correct. Head, fig. 39; hypopygium, figs. 40 and 41.

MYCOMYIA, Rond.

(*Sciophila*, Winn.).

This genus seems to me to be in a very unsatisfactory state; the following species have been identified by means of the male genitalia, but their synonymy in some cases is in much doubt.

\**M. affinis*, Staeg. (= *flava*, Winn.). Carrow, Cambridge, Crowborough (F.J.); New Forest (D.S.); Henley-on-Thames (H. Scott); Aberfoyle (A.E.J.C.).

*M. incisurata*, Zett. This seems to be by far the commonest species of the genus here.

\**M. winnertzii*, Dz. Common. Probably the *S. fasciata* of the list.

\**M. lucorum*, Winn. Felden, Herts. (A.P.); New Forest (D.S.).

\**M. wankowiczii*, Dz. Common. (New Forest, etc.).

*M. tenuis*, Wlk. (*apicalis*, Winn.; *radoskowskii*, Dz.). Largs, Logie, Cambridge, Crowborough (F.J.); Nethy Bridge (J.W.Y.); New Forest (D.S.); Padstow (C.G.L.). Walker's type has lost its abdomen, but as this is one of the most distinct species in the genus, I do not think there can be any doubt about the determination.

*M. maura*, Wlk. (*lugubris*, Winn.). The genitalia of this species resemble those of *S. penicillata*, Dz., rather closely; *S. penicillata* may perhaps be a synonym or variety. The colour, as usual, is very variable; the thorax is usually entirely shining black, but some specimens from Aberfoyle (A.E.J.C.) have it light brown with three dark reddish brown stripes.

NEOEMPHERIA, O.-S.

*N. pictipennis*, Hal. This is not the same as *Empheria pictipennis*, Winn. All the British specimens I have seen have a wing venation resembling that figured by Winnertz for *N. formosa*, but *N. pictipennis* has similar wing-markings in both sexes, while in *N. formosa* the male has

the whole apex of the wing dark. The abdominal markings of some specimens of *N. pictipennis* resemble those of *N. formosa*, but they are variable, especially in the female; one female from the New Forest (D.S.) has a dark apex to the wing. It is quite possible that *N. formosa* may be only a variety of *N. pictipennis*. The new name **winnertzi** is proposed for *pictipennis*, Winn. (*nec* Hal.).

#### POLYLEPTA, Winn.

*P. undulata*, Winn. This is the species which is in the list as *P. splendida*. A male specimen taken at Logie, 9. ix. 1909, by Mr. Jenkinson, lacks the small cell on both wings. This disconcerting variation, in the character on which the subfamily Sciophilinae was founded, occurs in a number of species. It has been recorded by de Man (Tijd. v. Ent. 1884, p. 137) in *Polylepta leptogaster*, and I have also met with it in *Empalia vitripennis*, *Sciophila lutea*, and *S. hirta* (see below).

#### PARATINIA, Mik.

*P. sciarina*, Mik (?). This species exhibits remarkable variation in size. I have compared mounts of the genitalia of a large specimen sent me by Mr. Carter, and a very small one in Mr. Jenkinson's collection and find them identical. If Mik's figure of the palpus is anything like accurate, the British species cannot be *P. sciarina*, and it is certainly not *P. difficilis*, Dz., but I do not like to describe it as new.

#### MONOCLONA, Mik.

This genus, it seems to me, has its nearest ally in *Acnemia*, the only difference being the absence of the small cell in the latter. Both have the apical half of the club of the halteres black, which is most unusual in this family. In fact, if an abnormal *Monoclona* without a "small cell" were to occur it could only be distinguished from *Acnemia* by the genitalia.

*M. rufilatera*, Wlk. Males from Studland (Dorset), Sheviock and Lelant, Cornwall (J.W.Y.); Cambridge (F.J.), and New Forest (D.S.), agree in having genitalia of the exact structure figured by Dziedzicki for *M. unicornuta*. In Dziedzicki's specimen, however, the genitalia were yellow, not black (as they are in ours), and the thorax

had three distinct blackish stripes, while in the seven specimens I have seen the thoracic stripes are completely fused. Lundström records a similar example to Dziedzicki's from Finland. It is probable that *M. unicornuta* is only a colour variety of *M. rufilatera*. The type of the latter is a female, but there is no doubt that the males are correctly associated with it.

*M. halterata*, Staeg., seems to be rare. I have only seen females—from Crowborough, Quy, and Cambridge (F.J.); Colwich and Rotherfield (G.H.V.).

SCIOPHILA, Mg. (Rond.).

(*Lasiosoma*, Winn.).

*S. hirta*, Mg. (= *L. pilosa*, Winn. var. *a*, according to Dziedzicki). A specimen taken 4. vi. 1902 at Cambridge, by Mr. F. Jenkinson, lacks the small cell on both wings, while another example taken 6. viii. 1908 at the same place by the same collector is even more remarkable in having the fifth vein simple (both wings). The latter specimen can be seen not to be a *Monoclonia* by its unicolorous yellow halteres. Both are males, and their genitalia do not depart in any way from the normal structure found in *S. hirta*. Hypopygium, figs. 42 and 43.

*S. lutea*, Macq. (= *L. analis*, Winn., as Dr. Dziedzicki informs me). The structure of the male genitalia is the only sure distinction of this species, as it is very variable in colour. Some specimens are almost entirely yellow, others almost entirely blackish-brown, but even in the darkest specimens the hypopygium remains yellow, and does not vary in structure. A female from Cambridge, 11. vii. 1906 (F.J.) has lost the small cell on the right wing only. Hypopygium, fig. 53.

*S. rufa*, Mg. The species which I recognise under this name agrees fairly well with Winnertz's description, but the male has black hair on the last few segments of the abdomen. It is the largest species of the genus in this country, and has been bred by Dr. Sharp and Mr. H. St. J. K. Donisthorpe from a *Polyporus* growing on birch trees at Rannoch. Walker's *S. ochracea* may be a synonym, but the type appears to have been lost. Hypopygium, fig. 56.

*S. fenestella*, Curt. This was erroneously referred by Mr. Jenkinson to *Apoliphthisa*; it is evidently a true



*Sciphila*. The subcostal cross-vein † is situated at about the middle of the small cell, which is not normally the case in any other species I have seen. Hypopygium, figs. 48-50. I have seen two males, one from West Woodhay (F.J.), the other from New Forest (D.S.); a third in the Clifton collection in the British Museum seems to be a variety of this species (see fig. 50).

\**S. nigra*, Landrock. Lochinver, and Aldburgh (J.W.Y.) Blairgowrie (A.E.J.C.); New Forest (D.S.); Dyffryn (G.H.V.); Stoke Wood (J.H.W.). This may be a variety of Winnertz's *L. nitens* with the hind femora partly yellowish.

\**S. varia*, Winn. Logic, 1 ♂ 1 ♀ (F.J.). Hypopygium, figs. 51 and 52.

\***S. sharpi**, sp. n. ♂

*Nigra, subnitida, robusta; S. hirtae similis, differt magnitudine et hypopygio.*

*Head, thorax and abdomen* black, rather shining, with yellow pubescence. Palpi, two basal joints of antennae, prothoracic lobes, coxae, femora, tibiae and halteres yellowish, tarsi and extreme tip of hind tibiae dark. *Wings* subhyaline, veins dark; subcostal cross-vein placed more basally than the small cell which is practically square; costa reaching only a small distance beyond the tip of the first longitudinal vein; upper fork nearly sessile; axillary vein strong, reaching a little beyond the base of the lower fork. *Genitalia*, figs. 54 and 55. Length 6 mm. A large species, about the size of *L. rufum*.

A single male from Nethy Bridge, Inverness, July 1910 (*D. Sharp*).

\**S. interrupta*, Winn. Lyndhurst (G.H.V.); Mildenhall (J.W.Y.). Dr. H. Dziedzicki very kindly sent me copies of his drawings of the hypopygium of Winnertz's type; these showed some slight differences from those here given, figs. 44 and 45; not greater, however, than between the two specimens of *S. fenestella* figured. The two hairs on the dorsal plate of Winnertz's specimen are much shorter and thicker.

\**S. geniculata*, Zett. One male from Whiting Bay, Arran (Rev. J. Waterston), presented to the British

† Walker's statement (Ins. Brit. III. p. 42) that the "subcostal vein is not connected with the radial" is in direct disagreement with Curtis' figure.

Museum by Mr. A. E. J. Carter. This very closely resembles *S. nigra*, Landrock, except in the hypopygium. Dr. Bengtsson of Lund informs me that the one remaining specimen of Zetterstedt's series has lost its abdomen, so that there is no possibility of verifying the determination. Hypopygium, figs. 46 and 47.

**\**S. jenkinsoni*, sp. n.**

*Nigra, nitida*; palpis, antennis basi, halterum basi, coxis pedibusque flavis, tarsis fuscis; venula transversali subcostali pone cellulam cubitalem anteriorem inserta.

♂ ♀. *Head* blackish; palpi yellow; antennae a little longer than the thorax, first two joints and basal half of third yellow, remainder blackish. *Thorax* shining black or black-brown, a little yellowish below the shoulders, clothed with rather sparse yellow pubescence. *Abdomen* black, rather shining, long and thin in the male, thicker in the female; pubescence yellowish. Hypopygium, fig. 57. *Legs* with the coxae, femora and tibiae yellow-ochreous; trochanters black; tarsi dark brown. *Wings* hyaline; the subcostal cross-vein is placed distinctly beyond the small cell, which is less rectangular than in most species of the genus; fork of fourth vein sessile; upper branch of fifth vein less curved at the base than usual. Halteres with a light ochreous stem and a black knob. Length 5 mm.

Aldenham, Salop, 1 ♂ (type in British Museum—F.J.); Logie, 1 ♂ 1 ♀ (F.J.). The position of the subcostal cross-vein and the dark knob of the halteres will distinguish this species from all those previously described.

**EMPALIA, Winn.**

*E. vitripennis*, Mg. In Walker's type of *Mycetophila finalis* (which is really this species) and in a specimen from Crowborough, 11. viii. 1906 (F.J.), the small cell is absent on one wing, while in one from Studland, Dorset (J.W.Y.), one from Crowborough, Sussex (F.J.), and a third from the New Forest (D.S.), it is wanting on both wings. In such cases the species can be recognised by the very characteristic elongate hypopygium.

**\**E. paradoxa*, sp. n.**

*E. vitripenni similis, differt hypopygio et abdominis segmentis 2-4 maculis basalibus (nec apicalibus) flavidis; vena brachiali nulla.*

♂ ♀. *Head* blackish; ocelli almost in a straight line; palpi and scape of antennae yellow; flagellum of antennae dark brown; antennae about as long as thorax in female, a little longer in the male. *Thorax* black, mesonotum rather shining, black-haired. *Abdomen* dark brown, first segment with apical, second to fourth segments with basal lateral yellowish spots; genitalia brownish-black. Coxae and femora yellow, hind femora with a short black stripe at the base beneath, and rather broadly black at the apex. Tibiae brown, spurs yellow-brown; tarsi dark fuscous. *Wings* hyaline, venation as in *E. vitripennis*, but the small cell is absent. Halteres yellow. Length 3.5 mm. (without antennae). Wing, fig. 61; ♂ hypopygium, figs, 58-60.

Type ♂, and two females from Lyndhurst, New Forest (F.J.); two males from Lochinver, Sutherland (J.W.Y.); a male from Lyndhurst and another from Stokenchurch (G.H.V.). Type in the British Museum.

The absence of the small cell on both wings of all the five specimens would seem to place this species in *Boletina*, but the general appearance, the structure of the male hypopygium and the slightly different venation (the forks of the fourth and fifth veins have longer stalks than in *Boletina*, and the anal vein is not nearly so well marked), all tend to show that the real relationships of the species are with *Empalia*.

#### APOLIPHTHISA, Grzeg.

*A. subincana*, Curt. Logie (F.J.); Nethy Bridge (C.G.L.); Spey Bridge, Inverness, and Sheviock, Cornwall (J.W.Y.); New Forest (D.S., F.J.). Haliday's description of *Tetragoneura melanoceros* applies in every detail to the insect which Mr. Jenkinson has named (no doubt correctly) *A. subincana*, Curt., and it is reasonably certain that the names are synonymous. *A. rara*, Grz., the type of the genus, is also, I consider, the same species, although Grzegorzec does not mention the slightly expanded front tarsi of the female. This feature is by no means conspicuous and may well have been overlooked.

#### \*ECTREPESTHONEURA, Enderl.

Enderlein (Stettin. Ent. Zeit. 1911, p. 155) introduces this genus for *Tetragoneura hirta*, owing to the marked difference in neuration between that species and *T. sylvatica*.

DZIEDZICKIA, Joh.

*D. (Hertwigia) marginata*, Dz., has occurred to Mr. Jenkinson at Logie, Auchenbowie, and Crowborough. It varies considerably in size and colour, some specimens having quite distinct yellow bands on the apices of the abdominal segments, others not.

\*LOEWIELLA, Meun.

\**L. hungarica*, Lundstr. Grantown-on-Spey, 17. viii. 1912, 1 ♂ (J.W.Y.); Kirkmichael, Perth, 1 ♂ (A.E.J.C.).

\*PARANEUROTelia, Landr.

\**P. dispar* (Winn.). Nethy Bridge, 2 ♂ (D.S.). Although the subcostal cross-vein is absent, this species undoubtedly belongs to Landrock's new genus, as the neurulation is otherwise the same as in *P. dziedzickii*, Landr. The wings are shortly pubescent; if this is also the case in *P. dziedzickii* it will distinguish the genus from *Boletina*, though not from *Anaclinia*.

SYNTEMNA, Winn.

\**S. flava*, sp. n.

*Flava*; thorace nigro-bimaculato, abdominis incisuris segmentisque ultimis nigris; antennis apice tibiis tarsisque fuscis.

♂. Head blackish on the vertex, yellow on the front. Antennae with the first three joints yellow, the next three yellowish beneath, the remainder dark; joints of flagellum scarcely longer than broad. Thorax yellow; a pair of large elongate black spots above and in front of the roots of the wings; three rows of black setae, the lateral ones placed along a darkened line in the integument. Abdomen yellow, the posterior margins of the first five and practically the whole of the sixth and seventh segments black: pubescence black. Genitalia yellowish, a pair of black combs transversely placed near the base are very conspicuous from above. Legs with the coxae and femora yellow; tibiae and tarsi brownish; tibial spurs orange. Wings yellowish tinged; tip of Sc immediately above base of R<sub>s</sub>; base of fork of Cu far before cross-vein R-M; anal vein extending about level with cross-vein R-M. Length 6.5 mm.

The Doward, Herefordshire. 14. vi. 1910, 1 ♂ (*Dr. J. H. Wood*). Type in *Dr. Wood's* collection.

The only near ally of this species is the North American

*S. polyzona*, which is much smaller and differs in several details of coloration.

## BOLETINA, Mg.

In order to determine the species of this genus with certainty it is usually necessary to remove and mount the male genitalia, but some species are recognisable by other characters, and for these the following table is put forward.

- |   |  |
|---|--|
| 1. Subcostal cross-vein absent . . . . .  | 2.   |
| Subcostal cross-vein present . . . . .  | 4.   |
| 2. Shoulders yellow, first four abdominal segments with large triangular lateral yellow patches . . . . . | <i>reuteri</i> , Ldst.   |
| Thorax and abdomen black . . . . .  | 3.   |
| 3. Third vein ( $R_3$ ) rather wavy . . . . .   | <i>inermis</i> , Ldst.   |
| Third vein almost straight . . . . .  | <i>villosa</i> , Lndr.   |
| 4. Fork of fifth vein (Cu) rather short [ <i>Empalia paradoxa</i> , sp. n.]                               |  |
| Fork-cells normal . . . . .   | 5.   |
| 5. Thorax cinereous with three black stripes, the middle one divided . . . . .                            | <i>trivittata</i> , Mg.  |
| Thorax not distinctly striped . . . . .   | 6.   |
| 6. Shoulders and posterior borders of abdominal segments obviously yellow . . . . .                       | <i>basalis</i> , Mg., ♀.   |
| Thorax and abdomen black or blackish . . . . .  | 7.   |
| 7. Costa produced at most one third of the distance from the apex of $R_3$ to that of $M_{1+2}$ . . . . . | 8.   |
| Costa produced about half the distance . . . . .  | 9.   |
| 8. Third and fourth antennal joints dark . . . . .  | <i>plana</i> , Wlk.  |
| Third and fourth antennal joints yellow . . . . .   | <i>basalis</i> , Mg., ♂.   |
| 9. Medium-sized species; anal vein well-marked . . . . .  | <i>lundbecki</i> , Ldst.   |
| Small species; anal vein rather faint . . . . .   | <i>sciarina</i> , Staeg.,<br><i>dispecta</i> , Dz., <i>brevicornis</i> , Ztt., <i>gripha</i> , Dz., <i>nigricans</i> , Dz.,<br><i>moravica</i> , Lndr., <i>trispinosa</i> , sp. n., <i>lundstroemi</i> , Lndr. |

*B. borealis*, *B. winnertzi*, *B. dubia*, and *B. analis* are omitted from the above table, as I am unable to confirm them as British, having seen no males.

\**B. reuteri*, Lundstr. New Forest (D.S., C.G.L., F.J.—a long series); Beattock (C.G.L.); Loch Assynt and Spey Bridge (J.W.Y.); Chippenham (G.H.V.—bred from rotten stump). I have examined 55 specimens and find that in only one of them is the subcostal cross-vein present.

\**B. inermis*, Lundstr. Logie and Crowborough (F.J.); New Forest, Wells (Somerset), and Padstow (C.G.L.);

Lochinver, Porthcawl, and Mundesley (J.W.Y.); Stoke Wood (G.H.V., J.W.Y.); Polton (A.E.J.C.). Two of the twenty-two specimens I have seen have the subcostal cross-vein present. The outer claw on the front leg of the male is greatly enlarged and bears about eight fine teeth on its underside; the front claws of the female are alike, and each bears only a single tooth. The hypopygium is orange with the apical half of the dorsal surface black, and not all brown as stated by Lundström.

\**B. villosa*, Landrock. Aberfoyle, 1 ♂, and Kirk-michael, 1 ♂ (A.E.J.C.); Logie, 1 ♂ (F.J.). In all these three specimens there is a strong bristle before the apex of the genital claspers (fig. 62); the abdomen is entirely black, and the tibial spurs are blackish. In all these points our specimens differ from the true *B. villosa*, but I hardly think they can be specifically distinct, as the agreement in other respects is so close. Two out of the three specimens have the hypopygium dark brown, yellowish at the base.

*B. plana*, Wlk. (= *gzregorzekii*, Dz.). Stokenchurch (J.W.Y.); Logie (F.J.); New Forest (D.S.). This is the species recorded by Verrall as *B. basalis*, Mg. The latter also occurs, *e. g.* at Logie (F.J.); Nairn, Rannoch, Chippenham (G.H.V.); Nethy Bridge (D.S.).

\**B. lundbecki*, Lundstr. Logie and Crowborough (F.J.); Polton (Midlothian) and St. Kilda (A.E.J.C.). I have seen several specimens (from New Forest, D.S., and Westhide, J.H.W.) of a female *Boletina* with *thickened front tarsi*, which may possibly be the female of this species; no species of *Boletina* with this character has been described.

\**B. nigricans*, Dz. Nethy Bridge (D.S.). The hypopygium (fig. 63) differs slightly from Dziedzicki's figure.

\**B. dispecta*, Dz. Stoke Wood, Hereford, 1 ♂ (J.H.W.).

\**B. griffa*, Dz. This species seems to be much commoner than *B. sciarina*. The females appear to be indistinguishable.

\**B. moravica*, Landr. Logie and Crowborough (F.J.); Aviemore (J.W.Y.). These specimens have dark spurs, thus resembling *B. conformis*. Dolgelley (G.H.V.). This specimen has light spurs.

\**B. brevicornis*, Zett. 1 ♂ New Forest (D.S.). The hypopygium (fig. 64) does not quite agree with Lundström's figure.

\* *B. lundstroemi*, Landr. 1 ♂ Aviemore (J.W.Y.).

\**B. trispinosa*, sp. n. ♂.

*B. sciarinae similis, differt hypopygio et coxis posterioribus tiliarumque calcaribus fuscis.*

Closely resembles *B. sciarina* in general appearance, yet the genitalia (fig. 65) are totally unlike those of any species of *Boletina* which has so far been figured. If it were not for the darkened posterior coxae I should have said that the species was *B. conformis*, Siebke (pseudosciarina, Strobl), but it seems best on the whole to describe it as a new species. The antennae are about twice the length of the head and thorax together.

A male from Lelant, Cornwall, 31. viii. 1907 (J.W.Y.), (type, in the British Museum); another from Bettws-y-Coed (G.H.V.). This latter specimen has only the basal half of the hind coxae darkened, and the genitalia have an additional long spine, which, however, is weaker than the other three.

## PHTHINIA, Winn.

\**P. winnertzi*, Mik. Logie, Crowborough (F.J.); Beattock (C.G.L.); Sheviock, Cornwall (J.W.Y.); King's Lynn (E.A.A.); New Forest (F.C.A., D.S.). The hypopygium (fig. 66) is small, weakly chitinated and light yellow in colour. The anal vein is practically straight. Ovipositor, fig. 67.

*P. humilis*, Winn. The specimens I have seen of this species do not agree very well with the original description. They are larger (6 mm.), have a lighter coloured thorax and shorter antennae. Still I think the identification is probably correct. New Forest (D.S., F.C.A.); Crowborough (F.J.); Lelant (J.W.Y.). One of the specimens originally recorded under this name is *P. winnertzi*. Hypopygium, figs. 68 and 69; ovipositor, fig. 70. A specimen from Studland (J.E.C.) has the thorax with three sub-confluent dark brown stripes, and in this, as in three males from the New Forest, the genitalia are slightly different, the large black appendages (fig. 69a) not being nearly so broad. This form I at first took to be a distinct species.

The anal vein in *P. humilis* is curved downwards towards the tip.

## COELOSIA, Winn.

As I interpret this genus it should include also *Phthinia thoracica*, Winn., and probably *P. curta*, Joh., a North American species.

\**C. tenella*, Zett. (= *flavicauda*, Winn.). Logie and Crowborough (F.J.); Nethy Bridge (D.S.).

*C. flava*, Staeg. I have seen only one recent specimen of this species (Bonchurch, G.H.V.), but there is a male in the Clifton collection in the British Museum, and Walker's type of *Mycetophila flava* is evidently *Coelosia flava*, though now much discoloured.

#### LEIA, Mg.

I very much doubt whether the three species (*terminalis*, Mg., *variegata*, Winn. and *elegans*, Winn.) are really distinct; in any case I have only seen one distinct British species, which had better be known as *terminalis*, Mg.

#### DOCOSIA, Winn.

*D. valida*, Winn. A female taken at Logie, 23. ix. 1904, by Mr. F. Jenkinson, appears to be a variety of this species. The legs and halteres are entirely blackish brown, as in *D. morionella*, Mik, but the yellowish pubescence extends on to the abdomen, and is not confined to the thorax and coxae. Other specimens from Stoke Wood (J.H.W.) have the legs almost all black, but in these the halteres are yellow.

*D. sciarina*, Mg. The mediastinal vein (Sc.) in this species seems to be much more bristly than in *D. valida*.

#### BRACHYPEZA, Winn.

*B. radiata*, Jenk. One female from Dartford, Kent (J.W.Y.).

#### \**B. spuria*, sp. n. (Verrall MS.).

*Flava*; *thorace* *grisescente*, *vittis* *3* *obscuris* *subconfluentibus*; *antennarum* *flagello* *vertice* *tarsisque* *fuscis*, *maris* *articulis* *3* *ultimis* *tarsorum* *anticorum* *flexis*, *subpilis*; *abdominis* *segmentis* *dorso* *fuscescentibus*; *alis* *subhyalinis*, *immaculatis*.

♂. *Head* dark brown, *frons* yellowish; *palpi* and *base* of *antennae* yellow, *flagellum* brown. *Thorax* greyish-ochreous, with short yellowish pubescence and black bristles on the margin; *mesonotum* with three rather indistinct and almost united brown stripes. *Pleurae* ochreous-brown. *Abdomen* yellow-ochreous, segments 1-5 with large triangular dark brown patches on the dorsum, the base of the triangle towards the base of each segment; sixth segment dark



brown except on the hind margin; hypopygium yellowish (figs. 71 and 72). *Legs* rather long and slender; fore tibiae shorter than the metatarsi; mid tibiae and metatarsi about equal in length. *Coxae* and femora yellowish; tibiae rather darker, the hind pair with three rows of bristles, spurs dark; tarsi dark brown. The last three joints of the front tarsi are (at least after death) bent round into an almost equilateral triangle; they and the second joint (especially the second) are clothed with a rather longer and denser pubescence than on the tarsi of the other legs, but are without spines. *Wings* slightly tinged with ochreous, but unspotted. Halteres yellow.

♀. Resembles the male, but front tarsi simple, and sixth abdominal segment more yellow, like the preceding ones. First, fourth and fifth abdominal segments each with two or three long hairs at the apex beneath. Length 5.6 mm.

Lodore, Cumberland, 2 ♂ (including type, in British Museum), 1 ♀ (G.H.V.); Ivybridge, S. Devon, 1 ♀ (G.H.V.); Three Bridges, Sussex, 1 ♂ (G.H.V.); Brodie, N.B., 2 ♂ (J.W.Y.); Wells, Somerset, 1 ♀ (C.G.L.); New Forest, 1 ♀ (D.S.); Westhide, (1 ♂) Haugh Wood (1 ♂) and Stoke Wood (1 ♀), Hereford (J.H.W.).

*B. bisignata*, Winn. New Forest, 1 ♂ (D.S.).

#### RHYMOSIA, Winn.

The species of this genus are as a rule not very easy to distinguish except by genital characters, or in the case of *gracilipes*, *signatipes*, and *spinipes*, by the tarsal characters of the males. The four species *fenestralis*, *cristata*, *domestica*, and *macrura* differ from the other eight hitherto recognised as British in having the pale markings of the abdomen situated mainly towards the apices of the segments instead of at the bases. These four species may be easily separated by an examination of the thorax: *cristata* has two rows of stout spines; *fenestralis* has three dull reddish brown stripes; *domestica* and *macrura* have a dark thorax with shining greyish pubescence on the shoulders and sides.

I have seen no British specimen of *R. truncata*, Winn. Walker's *Mycetophila selecta*, which Mr. Verrall placed in *Rhymosia*, is quite unrecognisable, and as the type appears to be lost it had better be placed in the "expurgated" list.

\**R. gracilipes*, Dz. Felden, Herts. (A. P.); Newmarket (G.H.V.); Ledbury (J.H.W.).

\**R. signatipes*, Wulp. New Forest, Sept. 1904, 1 ♂ (C.G.L.).

\**R. spinipes*, Winn. Logie (F.J.); Lelant (J.W.Y.); Salcombe (G.H.V.); New Forest (F.C.A.).

\**R. virens*, Dz. Logie, Crowborough, Aldenham (F.J.); Felden (A.P.); Aviemore and Sheviock (J.W.Y.); New Forest (D.S.); Llangollen (G.H.V.); Nethy Bridge (D.S.).

\**R. domestica*, Mg. Seems to be common. Logie, Cambridge, Crowborough (F.J.); Beattock, New Forest, Wells (C.G.L.); Aviemore, Spey Bridge, Sheviock, Lelant (J.W.Y.); Newmarket (G.H.V.); Westhide, Tarrington (J.H.W.).

\**R. macrura*, Winn. I regard as *R. macrura* a species very similar to *R. domestica*, but with quite different genitalia, and with a short median pale line in front of the scutellum which *R. domestica* does not possess. I have seen the species from Logie (F.J.); New Forest (D.S. and C.G.L.); Felden (A.P.); Sheviock (J.W.Y.); Chippenham, Cambs. (G.H.V.); Nethy Bridge (D.S.); Stoke Wood (J.H.W.).

\**R. connexa*, Winn. Crowborough, 1 ♂ (F.J.); Bridgend, Glamorgau (J.W.Y.).

\**R. fovea*, Dz. Logie, 1 ♂ (F.J.). In this specimen the mediastinal vein ends in the subcostal, not freely between it and the costal. The general character and structure of the hypopygium, however, agree with Dziedzicki's description and figure. The same remarks apply to the Crowborough specimen of *R. connexa*.

\**R. placida*, Winn. Salcombe (G.H.V.).

#### ALLODIA, Winn.

(including *Brachycampta*, Winn.).

*A. crassicornis*, Stamm. Some very dark specimens from Felden and elsewhere evidently represent Winnertz's *A. obscura*, having the flagellum of the antennae all black and the thorax blackish instead of reddish. The male hypopygium, however, is quite typical, and *A. obscura* may safely be regarded as a dark variety of *A. crassicornis*.

*A. lugens*, Wied. (= *ornaticollis*, Mg.). This species perhaps shares with *Erechia fungorum* the position of being the commonest fungus-gnat in this country. It is extremely variable, especially in the abdomen, which ranges from entirely black to mainly yellow. No other fungus-gnat

has a thorax quite like it and it should be easy to recognise in all its varieties.

\**A. caudata*, Winn. This and *A. amoena* are also very common with us, all the remaining species being more or less rare. *A. caudata* is the species which is in the list as *B. griseicollis*, but I follow Lundström's interpretation of the latter, which also occurs with us (Logie, Crowborough, New Forest, etc.).

\**A. brachycera*, Zett. Logie, Forres, Cambridge (F.J.). Mildenhall (J.W.Y.); Newmarket (G.H.V.).

\**A. cinerea*, Lundstr. Logie (F.J.); New Forest (D.S.); Wyre (G.H.V.).

\**A. pistillata*, Lundstr. Cambridge (F.J.); Chippenham, Cambs. (G.H.V.).

\**A. fissicauda*, Lundstr. Crowborough, 4. x. 1903, 1 ♂ (F.J.).

\**A. silvatica*, Landr. Cambridge (F.J.); Newmarket, Cambs.; Stokenchurch, Oxon. (G.H.V.); Porthcawl, Glamorgan (J.W.Y.).

\**A. triangularis*, Strobl. Logie, 1 ♂ (F.J.).

\**A. barbata*, Lundstr. Stoke Wood, 1 ♂ (J.H.W.); Aviemore. 1 ♂ (J.W.Y.).

#### TRICHONTA, Winn.

\**T. atricauda*, Zett. Logie, Aldenham, Crowborough, Lyndhurst (F.J.); Nethy Bridge (C.G.L.); Studland (J.W.Y.); Colwich Park, Staffs. (G.H.V.); Stoke Wood (J.H.W.).

\**T. fissicauda*, Zett. Logie (F.J.); Bettws-y-Coed (G.H.V.).

\**T. melanopygia*, Zett. Logie (F.J.); Spey Bridge (J.W.Y.).

\**T. hamata*, Mik. Lochinver and Glenmore, (J.W.Y.); Bettws-y-Coed (G.H.V.); Nethy Bridge (D.S.).

\**T. spinosa*, Lundstr. Crowborough (F.J.); Dolgelly (G.H.V.).

\**T. submaculata*, Staeg. Colwich Park, Three Bridges, Newmarket (G.H.V.); Westhide (J.H.W.); Lelant, Sheviock, Dowlerry (J.W.Y.); Crowborough (F.J.); Studland (J.E.C.); King's Lynn (E.A.A.).

\**T. umbratica*, Winn. Harrow, 16. xi. 1912, 1 ♀ (F.W.E.). This specimen agrees very well with Winnertz's description, except that there is no yellow on the shoulders. I know

of no other described species which it could be. New Forest, 2 ♂ 1 ♀ (D.S.).

\**T. terminalis*, Wlk. (*funnebris*, Lundstr., ? Winn.). Logie and Crowborough (F.J.); Dunkeld (J.W.Y.); Felden (A.P.).

\**T. falcata*, Lundstr. Colwich Park, Staffs. (G.H.V.).

#### PHRONIA, Winn.

\**P. rustica*, Winn. Newmarket (G.H.V.); Lelant and Aviemore (J.W.Y.); Felden (A.P.); New Forest (D.S.); Nethy Bridge (C.G.L.); Crowborough, Auchenbowie, Morville (F.J.); Blairgowrie (A.E.J.C.).

\**P. forcipata*, Winn. Felden (A.P.); Crowborough, Logie, Auchenbowie (F.J.); Woolhope (J.W.Y.); Nethy Bridge (D.S.).

\**P. braueri*, Dz. Sawley (F.J.); Haslemere (E. W. Swanton); Lyndhurst (J.E.C.).

\**P. tenuis*, Winn. Newmarket, Chippenham (G.H.V.); Felden (A.P.); Sheviock, Lelant (J.W.Y.); Logie, Cambridge, Crowborough (F.J.); Polton, Midlothian (A.E.J.C.).

\**P. strenua*, Winn. Logie and Crowborough (F.J.).

\**P. triangularis*, Winn. New Forest, 1 ♂ (D.S.); Aviemore, 1 ♂ (J.W.Y.).

\**P. bicolor*, Dz. Aldenham, 5. ii. 1903, 1 ♂ (F.J.).

\**P. vitiosa*, Winn. New Forest (C.G.L. and D.S.); Loch Assynt, Studland, Sheviock, St. Ives, Lelant (J.W.Y.) Lodore (G.H.V.). Lt.-Col. Yerbury took a good series of this species in Cornwall last autumn. The female, which is undescribed, resembles those of *P. forcipula* and *P. crassipes* in having the front tarsi thickened.

\**P. taczanowskyi*, Dz. Newmarket, Butley Thicks (G.H.V.); New Forest (D.S.).

\**P. elegans*, Dz. Lodore, Colwich Park (G.H.V.).

\**P. disyrega*, Dz. 1 ♂ Nethy Bridge (D.S.).

\**P. interstincta*, Dz. 1 ♂ Glenmore (J.W.Y.).

#### EXECHIA, Winn.

\**E. spinuligera*, Lundstr. (= *spinigera*, Lundstr. nec. Winn.). This species is on the list as *E. spinigera*.

\**E. trivittata*, Staeg. Orford, Chippenham (G.H.V.); Sheviock, Lelant (J.W.Y.); Harrow and Pinner (F.W.E.); Logie, Cambridge (F.J.); Blythburgh (C.M.); New Forest (D.S., F.C.A.).

*\*E. trisignata*, sp. n. ♂.

*E. trivittatae similis, differt hypopygio et longitudine antennarum.*

Apart from the differences in the hypopygium and the slightly longer antennae I can see no differences between this and *E. trivittata*. Lundström seems to have confused the two; in his paper (Acta Soc. pro Fauna et Fl. Fennica, 1909) figs. 67 and 68a appear to represent *E. trisignata*, while fig. 68b is *E. trivittata*. Hypopygium, figs. 73-75; the appendages of the hypopygium of *E. trivittata* are shown for comparison (fig. 76).

Type in the British Museum from Beattock (C.G.L.); other specimens from Logie and Crowborough (F.J.); Polton. Midlothian (A.E.J.C.).

*\*E. parva*, Lundstr. Sheviock (J.W.Y.); Logie, Cambridge, Crowborough (F.J.); New Forest (D.S.).

*\*E. separata*, Lundstr. (= *concinna*, Lundstr. nec. Winn.) Felden (A.P.); Logie, Crowborough (F.J.); New Forest (D.S.); Newmarket (G.H.V.); Brockenhurst (J.E.C.); Tarrington and Ashperton (J.H.W.).

*\*E. lucidula*, Zett. Felden (A.P.); Newmarket (G.H.V.).

*\*E. bicincta*, Staeg. A male in the Clifton Collection (in British Museum), without locality, but probably from the London district; Studland, Dorset (J.W.Y.).

*\*E. nigroscutellata*, Landr. Felden (A.P.); Logie (F.J.); New Forest (D.S., F.C.A.); Blairgowrie (A.E.J.C.).

*\*E. subulata*, Winn. Sheviock, Lelant (J.W.Y.); New Forest (D.S., F.C.A.); Logie, Crowborough (F.J.).

*\*E. gracilicornis*, Landr. (= *tenuicornis*, Lundstr. nec. Wulp). Logie, Aldenham (F.J.); Felden (A.P.).

*\*E. unguiculata*, Lundstr. Nethy Bridge, 1 ♂ (D.S.).

*\*E. magnicauda*, Lundstr. Stokenchurch (G.H.V.).

*\*E. fimbriata*, Lundstr. Logie (F.J.); Brodie (J.W.Y.); Nethy Bridge (D.S.); Blairgowrie (A.E.J.C.).

*\*E. festiva*, Winn. Logie and Crowborough (F.J.); New Forest (C.G.L., D.S., F.C.A.); Crickhowell, Sheviock and Lelant (J.W.Y.); Tuddenham (G.H.V.); Stoke Wood (J.H.W.).

*\*E. contaminata*, Winn. (*dorsalis*, Lundstr. nec. Staeg.). Logie (F.J.); New Forest (D.S.); Studland (J.E.C.); Blairgowrie (A.E.J.C.); Nethy Bridge (D.S.); Coldborough (J.H.W.).

*\*E. pseudocincta*, Strobl. (*contaminata*, Lundstr. nec. Winn.). Nethy Bridge (C.G.L.); New Forest (D.S., F.C.A.);

Logie (F.J.); Kirtling, Suffolk (G.H.V.); Brockenhurst (J.E.C.).

\**E. pulchella*, Winn. (= *intersecta*, Lundstr.). Blairgowrie (A.E.J.C.); Brockenhurst (J.E.C.).

\**E. crucigera*, Lundstr. Cambridge (F.J.); Newmarket (G.H.V.).

\**E. clypeata*, Lundstr. Logie (F.J.); Musselburgh, Midlothian (A.E.J.C.).

*E. leptura*, Mg. New Forest (D.S., F.C.A.).

I have seen several other species which I have been unable to name, the hypopygia not having been figured; while *E. lateralis*, *tenuicornis*, *dorsalis*, and *interrupta* may be confirmed as British.

#### SCEPTONIA, Winn.

\**S. concolor*, Winn. Logie (F.J.); New Forest (C.G.L.); Mildenhall, Tottington (G.H.V.); Lelant, Downderry (J.W.Y.). This species seems to occur with *S. nigra*, but is rarer.

#### EPICYPTA, Winn.

*E. punctum*, Stan. Of the 24 specimens of this species which I have examined, no fewer than 19 have the four posterior coxae blackish. The median ocellus, though very small and difficult to see, is always present.

*E. trinotata*, Staeg. Mr. Jenkinson (Ent. Mo. Mag., 1908, p. 131) is evidently right in his identification of this species. I have examined 24 specimens, and find very little variation. The median ocellus is much more evident than in *E. punctum*. This species has been bred from limpet-like larvae found feeding on wood of a decaying oak, at Haslemere, Surrey, by Mr. E. W. Swanton.

*E. scatophora*, Perris. Two distinct species have apparently been confused under this name, one or both of which should in my opinion be transferred to *Mycetophila*. The species identified by Mr. Jenkinson is evidently the *E. scatophora* of Winnertz, but this cannot be the true *E. scatophora*. Winnertz refers to "das kleine Afterglied und die kleine Zange der ♂," while Perris says the male armature "consiste en deux appendices linéaires, aplatis, velus, longs de près de un millimètre," and gives a figure which bears out this description. Strobl describes the male armature of *E. aterrima* thus: "zwei sehr langen, lanzettlichen, gelben, dicht mit langen, gekräuselten Flaumhaaren

besetzten Lamellen;" he does not refer to *E. scatophora*, but it is fairly evident that he had Perris's insect before him. The fact that the larvae of *E. scatophora* and *E. trinotata* agree in their remarkable habits may show that they really belong to the same genus, but as Strobl definitely states that "die Randader geht *nicht* über die Mündung der dritten Längsader," it is difficult to see how the species can be kept in *Epicyptha*. Increased knowledge may of course show that the larvae of other species of *Mycetophila* form the same peculiar limpet-like cases.

In the other species, with the very small hypopygium, the costa does not extend beyond the third vein, and the median ocellus is absent, so that there is really nothing to exclude it from *Mycetophila*. In fact, I have been unable to detect any difference between the hypopygium of this species and that of *M. unicolor*, although Lundström has just described the form under consideration as a distinct species (*M. posticalis*); very probably *E. scatophora*, Winn., is only a variety of *M. unicolor*, Stan., without the central wing-spot. If the female of *M. unicolor* should prove to have the two long hairs on the ventral side of the second abdominal segment, the specific identity of the two would be fairly well established. These hairs are not present in the male sex; the specimen referred to by Mr. Jenkinson as taken at Cambridge, 24. vii. 1904, is really a male of this species, and I have seen another from Crowborough, 5. viii. 1912 (F.J.).

The synonymy of the two may stand as follows:—

1. *Mycetophila scatophora*, Perris (1849).  
    ? *Mycetophila aterrima*, ♀, Zett. (1852).  
    *Epicyptha aterrima*, ♂, Strobl. (1894).  
*Mycetophila unicolor*, Stan., var. *posticalis*.  
    *Epicyptha scatophora*, Winnertz, Jenkinson.  
    *Mycetophila posticalis*, Lundstr. (1912).

#### MYCETOPHILA, Mg.

(including *Mycothera*, Winn.)

Since Lundström has found that the occurrence of a median ocellus is not constant even within the limits of a species, and as it is found in several species which have been included in *Mycetophila*, the genus *Mycothera* cannot be maintained; the type species (*M. dimidiata*, Staeg.)

exhibits no other structural differences from *Mycetophila*, though *M. semifusca*, Mg., is remarkable for the shortness of its cubital fork, and approximates more or less to the closely allied genus *Zygomysia*. *M. semifusca* may eventually require a new genus (the name *Mycothera* unfortunately being inapplicable to it if *M. dimidiata* is excluded), but for the present at least it is placed in *Mycetophila*.

The following table of the British species of this genus may be of use in roughly determining a specimen, but too great reliance should not be placed upon it. Several of the species can only be properly separated by a microscopical examination of the male genitalia. A few more British species of *Mycetophila* are certainly still to be found.

1. Wings quite unspotted . . . . . 2.  
Wings with at least a central dark spot . . . . . 3.
2. Reddish-brown species . . . . . *punctata*, Mg.  
Shining black species . . . *unicolor*, var. *posticalis*, Ldst.
3. Wings with a central spot only (*M. stolidus* sometimes has a small rather faint subapical spot) . . . . . 4.  
Wings with a central spot and other dark markings more towards the apex . . . . . 7.
4. Reddish or brown species, thorax dull, usually striped . . . . .  
*lineola*, Mg.  
Black species, thorax shining, unstriped. . . . . 5.
5. Thorax and (usually) abdomen entirely black *unicolor*, Stan.  
Thorax with yellow shoulder patches . . . . . 6.
6. Yellow patches between wing base and scutellum *stolidus*, Wlk.  
No such patches present; shoulder patches much smaller  
*pumila*, Winn.
7. Wings with a complete but ill-defined dark fascia just beyond the middle; cubital fork very short . . . *semifusca*, Mg.  
Wings without such fascia; cubital fork not very short, though its base is sometimes rather beyond that of the median . . . 8.
8. Subapical wing markings reaching and usually including the apex of the first longitudinal vein ( $R_1$ ) . . . . . 9.  
Subapical wing-fascia entirely distal to the apex of the first longitudinal vein . . . . . 16.
9. Thorax shining black, reddish in front . . . *adumbrata*, Mik.  
Thorax dull (more or less) . . . . . 10.
10. Thorax striped . . . . . 11.  
Thorax unstriped, blackish, usually with yellowish shoulder patches . . . . . 13.



11. Centra spot of wings much enlarged, reaching costa  
*formosa*, Ldst.  
 Central spot not reaching costa . . . . . 12.
12. Apical area of wing dark, including an oval pale spot  
*dimidiata*, Staeg.  
 No pale spot included in the apical darkening of the wing  
*czyżekii*, Lndr.
13. Whole apex of wing dark . . . . . *stylata*, Dz.  
 Light areas included in the dark apical markings, even if the  
 apex itself is darkened . . . . . 14.
14. Hind femora with a dark line above . . . . . *vittipes*, Zett.  
 Hind femora dark at apex only . . . . . 15.
15. A dark patch in the anal cell (except in light specimens); wing  
 apex more or less darkened . . . . . ? *nebulosa*, Stan.  
 No dark patch in anal cell; wing apex not darkened  
*bimaculata*, F., *luteicauda*, sp. n.
16. Thorax all yellowish-brown, hind tibiae with bristles in three  
 rows (though the middle row may only comprise two  
 bristles) . . . . . 17.  
 Thorax dark, or with obvious dark stripes; hind tibiae with  
 bristles in two rows . . . . . 18.
17. Subapical wing-fascia large and conspicuous *cingulum*, Mg.  
 Subapical wing-fascia small and rather inconspicuous  
*confluens*, Dz.
18. Large reddish species, subapical wing-fascia forming four  
 distinct though not always completely separated spots  
*rufescens*, Zett.  
 Medium sized or small species, subapical wing-fascia not forming  
 four distinct spots . . . . . 19.
19. Thorax dull, or with two or three distinct stripes. . . . . 20.  
 Thorax shining, black, not striped or with the stripes com-  
 pletely confluent . . . . . 24.
20. Thorax shining, the stripes usually well separated (middle one  
 sometimes obsolete, especially in *M. signatoides*) *lunata*, Mg.†;  
*signata*, Mg., *sigillata*, Dz., *signatoides*, Dz., *guttata*, Dz.  
 Thorax dull . . . . . 21.
21. A dark blotch in the anal cell (sometimes indistinct). . . . . 22.  
 No dark blotch in the anal cell . . . . . 23.
22. Abdomen entirely blackish; thoracic stripes quite confluent  
*curviseta*, Ldst.  
 Posterior margins of abdominal segments pale, thoracic stripes  
 not confluent . . . . . 22a.
- 22a. Central spot of wing larger and mainly distal to the basal  
 portion of the third vein . . . . . *spectabilis*, Winn.

- Central spot of wing smaller and equally distributed on either side of the basal portion of the third vein . . . *russata*, Dz.
23. Thoracic stripes confluent . . . *marginata*, Winn.  
 Thoracic stripes not or scarcely confluent  
*finlandica*, sp. n., *fraterna*, Winn.
24. Subapical wing-fascia reduced to a roundish spot below the costa; the three pale spots in front of the scutellum very large . . . *rudis*, Winn.  
 Subapical fascia not so reduced, ante-scutellar spots smaller 25.
25. Subapical fascia with its anterior edge nearly vertical  
*blanda*, Winn.  
 Subapical fascia with its anterior edge much curved or oblique  
*tarsata*, Winn.†; *luctuosa*, Mg.; *fuliginosa*, Dz.; *obscura*, Dz.†

*M. dimidiata*, Staeg. This is apparently the *Mycothera* figured by Winnertz, but if so, his specimen had an abnormally short fork to the fifth vein. It is very common here and varies in the intensity of its wing markings and also in the number of spines on the underside of the mid tibiae; usually there is only one of the latter, but I have seen specimens with two and even three.

\**M. czížekii*, Landr. Two males and three females from Logie (F.J.), and a female from Nethy Bridge (D.S.) must, I think, be this species. They agree exactly with Landroek's description and figures (Wien. ent. Zeit. 1911. p. 165), except that a distinct median ocellus is present. Herr Landroek informs me that in some of his specimens a median ocellus can be detected. It rather closely resembles *M. dimidiata*, but the pale oval near the tip of the wing is absent; there are two equal spines beneath the mid tibiae. This species much resembles *M. sordida*, Wulp; it differs in the lighter, striped thorax. This and the next two species were placed by Mr. Jenkinson as possibly varieties of *Epicypia punctum*.

\**M. stylata*, Dz. (*Mycothera*). Five specimens (1 ♂ 4 ♀) from Logie (F.J.). I cannot detect the median ocellus in any of them. The species somewhat resembles the last, but the apical  $\frac{2}{5}$  of the wing is all darkened, the hind femora have a black line above, and the thorax is darker and rather more shining.

\**M. adumbrata*, Mik. One female, Logie, 23. ix. '05 (F.J.). This specimen diverges from Mik's description in two respects: (1) it has three ocelli; (2) the fork of the fifth

† In these species the thorax is only somewhat shining.

vein is distinctly shorter, though not narrower. Both these characters are known to be variable in some species. *M. adumbrata* has a superficial resemblance to *E. punctum*, but the costa does not extend beyond the third vein, and the hind femora are dark only at the apex.

*M. unicolor*, Stan. Of the typical form of this species, with a central wing-spot, I have only seen a single male (Cambridge, 2. xi. '03, F.J.). See notes under *Epicrypta scatophora*.

\**M. formosa*, Lundstr. (= *pulchra*, Lundstr.). This very distinct species has occurred at Inveran and Colwich Park (G.H.V.); Crowborough (F.J.); New Forest (F.J., D.S., and C.G.L.) Lundström's *M. pulchra* seems to have been described from a dark female of this species.

\**M. nebulosa*, Stan. ? What I cannot but regard as this species is represented by a good number of specimens from Logie and Crowborough (F.J.), two from the New Forest (D.S. and C.G.L.), and one from Aviemore (J.W.Y.). In dark specimens the apical wing-fascia which includes a pale spot (somewhat as in *M. dimidiata*), reaches the hind margin, and there is a distinct brown blotch in the anal cell, these points not being observed by Winnertz. But the wing-markings vary a good deal in intensity and some specimens answer fairly closely to Winnertz's description. The hind femora are broadly brown at the apex, which also is not mentioned by Winnertz. So far as I have observed, there are only two ocelli. The wing-markings of the palest specimens resemble those of *M. vittipes*. Hypopygium, figs. 79 and 80.

*M. vittipes*, Zett. This seems to be rather common. In every one of 35 examples which I have examined microscopically, three ocelli are present. There are two forms, which may perhaps prove to be distinct species: (1) wings and coxae yellower, thorax with two large yellowish shoulder-patches, wing not darkened round apex; (2) wings and coxae greyer, thorax only very narrowly yellow on the front margin, wing darkened round apex. The latter form is the true *M. vittipes*; the former has been described (evidently by mistake) by Dziedzicki as *M. gibba*, Winn.

*M. stolidus*, Wlk. The type (a male) is fortunately still in existence and is in fairly good condition. A large series has been taken in the New Forest by Dr. Sharp and Mr. C. G. Lamb. There is frequently a fairly distinct pre-apical wing-spot, as well as the central spot on the cross-vein.

There are a pair of yellow patches one on each side in front of the scutellum, but the scutellum itself is entirely black.

*M. luctuosa*, Mg. One male from Crowborough (F.J.) shows a remarkable abnormality in the venation: the fork of the fourth vein of one wing is divided into two by a cross-vein about the middle, the two branches being drawn in so as to form an oval cell somewhat like that of *Synapha*.

*M. obscura*, Dz. Tuddenham, Boyton (G.H.V.); Crowborough (F.J.). This seems to me to be probably only a dark variety of *M. lunata*, Mg. (Winn.), as the hypopygia are practically identical.

\**M. fuliginosa*, Dz. Mildenhall and Tottington (J.W.Y.); Felden (A.P.); Dunphail (F.J.).

\**M. blanda*, Winn. Logie, Boat o' Garten, Cambridge, Crowborough (F.J.); New Forest (D.S., C.G.L.). The brown cloud in the anal cell is absent in most of the British specimens I have seen, but some Dr. Lundström sent me from Finland have it very distinctly.

\**M. tarsata*, Winn. Westhide, 1 ♂ (J.H.W.).

\**M. curviseta*, Lundstr. Plymbridge (G. C. Bignell); Southern Down and Bridgend, Glamorgan (J.W.Y.); Felden (A.P.); Westhide (J.H.W.—in this specimen the blotch in the anal cell is wanting).

\**M. spectabilis*, Winn. Dolgelly, Bettws-y-Coed, Ugbrooke, Lyndhurst (G.H.V.); Felden (A.P.); Sheviock (J.W.Y.); Crowborough (F.J.); New Forest (D.S., C.G.L.); Haugh Wood and Stoke Wood, Hereford (J.H.W.).

\**M. marginata*, Winn. This seems to be one of the commonest species.

\**M. fraterna*, Winn. Logie (F.J.); Lelant (J.W.Y.); Bettws-y-Coed (G.H.V.).

\**M. finlandica* nom. n. (Dziedziicki, MS.—*lunata*, Lundstr.  *nec* Mg.). Nethy Bridge (C.G.L.); Logie and Crowborough (F.J.); Bettws-y-Coed (G.H.V.); New Forest (D.S.); Stoke Wood (J.H.W.).

\**M. confluens*, Dz. New Forest and Nethy Bridge (D.S.); Aviemore (J.W.Y.).

\**M. sigillata*, Dz. Bettws-y-Coed (G.H.V.).

\**M. signatoides*, Dz. New Forest (D.S.); Crowborough (F.J.); Iken, Lelant (J.W.Y.); Felden (A.P.); Llangollen, Bettws-y-Coed, Rydal, Newmarket, Stoke Wood, Hay (G.H.V.).

\**M. guttata*, Dz. Lodore (G.H.V.); Tottington (J.W.Y.). Felden (A.P.); Crowborough (F.J.); New Forest (D.S.).

*M. signata*, Mg. (Dz.). I have only seen two males of this species, from Crowborough (F.J.) and Westhide (J.H.W.). The females of the *signata* group seem to be indistinguishable.

*M. rufescens*, Zett. (= *ornata*, Stph.). This is the largest species of the genus here, and one of the most distinct, the only species which at all resembles it being *M. cingulum*. It is not uncommon. Stephens gave an excellent figure, the plate on which it appears bearing the inscription "London, published by J. F. Stephens, 30th April, 1832." The name of the species, however, does not appear on the plate, and his description did not appear till 1846; meanwhile, Zetterstedt had published his *M. rufescens* (1838). The *M. lutescens* of the British List is most likely this species.

\**M. rudis*, Winn. New Forest, 1 ♂ 2 ♀ (D.S.); Sheviock, 1 ♂ (J.W.Y.). These specimens agree very nearly with Winnertz's description, but in none of them does the pre-apical wing-fascia reach the costa, a remarkable character by which, if it were constant, the species might easily be recognised. The dark markings of the thorax occupy the greater part of the surface of the mesonotum, leaving only two rather large shoulder patches and three smaller patches in front of the scutellum yellow. The black colour extends to the front margin in the middle. The hypopygium (figs. 81 and 82) appears small in the dried specimens, being almost retracted, but in reality it is quite large; Winnertz's description does not fit well, but descriptions of this organ are apt to be misleading. Apart from these points there is no disagreement between our specimens and the description of *M. rudis*. Dr. H. Dziedzicki very kindly sent me a specimen which he had compared with Winnertz's type; it is identical in all respects with ours.

\**M. russata*, Dz. New Forest (D.S.); Henley-on-Thames, bred from *Polystictus versicolor* (H.S.); Felden (A.P.); Wormsley, Suffolk (G.H.V.). All the specimens (about a dozen) have a distinct blotch in the anal cell, not mentioned by the describer, while the front tarsi of the male are not thickened, as they were in Dziedzicki's single specimen. The hypopygium agrees very closely with the figure.

\**M. luteicauda*, sp. n.

*M. xanthopygae similis, differt hypopygio.*

This species answers almost exactly to Winnertz's description of *M. xanthopyga*, and at first I had no hesitation in so naming it. Dr. H. Dziedzicki, however, has very kindly sent me drawings of the hypopygium of Winnertz's type of *M. xanthopyga*, which prove that the two insects are not the same.

In our species the median ocellus is distinct; the scutellum is entirely black; the abdomen is all black except the hypopygium, which is yellow; the branches of the fourth vein are indented downwards before the middle; the base of the fork of the fifth vein is considerably posterior to that of the fourth; the hind tibiae, though thickened apically, are not curved. For the rest the insect resembles *M. xanthopyga*. Hypopygium, figs. 77 and 78.

Described from one male from Crowborough Warren, 7. viii. 1906 (F.J.) (type—in Cambridge Museum); two other males from Colwich Park, Staffs. (G.H.V.), and a fourth from the New Forest (D.S.).

\**OPISTHOLOBA*, Mik.

\**O. caudata*, Staeg. Grantown-on-Spey, 17. viii. 1912, 1 ♀ (J.W.Y.); Logie, 27. viii. 1909, 1 ♀ and 29. ix. 1910, 1 ♀ (F.J.). These specimens diverge from Mik's figure in that the branches of the fourth vein are scarcely curved. In one from Logie the dorsum of the abdomen is entirely dark, but the others are more normal in having the fifth and sixth segments dorsally mainly yellow. The abdomen is flattened dorsally, not laterally as in most species of *Mycetophila*. The distinction between the two genera, however, is a very slender one.

*CORDYLA*, Mg.

\**C. nitens*, Winn. The species which I have determined as *C. nitens* seems to be fairly common in the New Forest (D.S., C.G.L., F.J., J.W.Y.) and has also been taken at Logie and Crowborough (F.J.), and Stoke Wood (J.H.W.). It agrees well with Winnertz's description, *except* that the antennae of the male are 14-, not 16-jointed. I have examined a number of specimens, which agree so well in general with Winnertz's description that it seems possible he may have been mistaken as to the number of antennal

joints. *C. nitens* may be at once separated from the three following by its shiny black thorax.

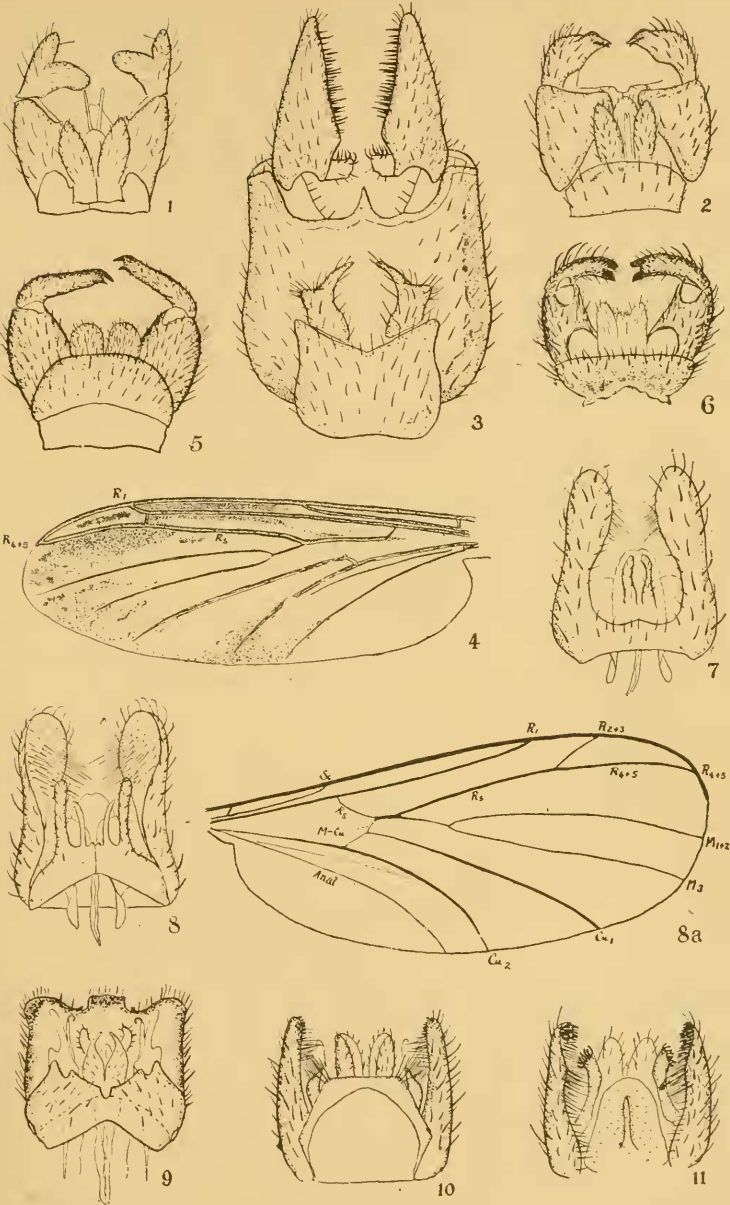
*C. fasciata*, Mg. (? *flaviceps*, Staeg.). This species, like *C. nitens* has only 14-jointed antennae in the male. It seems to me that *C. flaviceps*, Staeg., is a synonym, but Winnertz definitely states that the antennae of male *C. flaviceps* are 16-jointed. The species (or the two species, if they are distinct) differ from all the other members of the genus found in Britain in having the palpi entirely yellow. The length of the fork of the fifth vein is very variable.

*C. semiflava*, Staeg. This species is most easily known by the deep black basal palpal joint, the two apical joints being yellow. As stated by Winnertz, the male antennae are 16-jointed. This is much the rarest of the four British species known to me.

*C. crassicornis*, Mg. This common species may be known by the entirely dark blackish-grey thorax and palpi. I do not know *C. brevicornis*, Mg., but it is probable that the record of its occurrence in Britain really referred to *C. crassicornis*. The species is under both names in the Verrall collection.

## LIST OF FIGURES.

1.	<i>Bolitophila oclusa</i> , sp. n.	Hypopygium from above.	× 50.
2.	„ <i>saundersi</i> , Curt.	„ „	„
3.	<i>Ceroplatus testaceus</i> , Dalm.	„ „	„
4.	„ „ „	Wing.	× 7·5
5.	<i>Platyura marginata</i> , Mg.	Hypopygium from above.	× 29.
6.	„ <i>semirufa</i> , Mg.	„ „	× 35.
7.	„ <i>macroccra</i> , sp. n.	„ „	× 50.
8.	„ „ „	„ „ below.	„
8a.	„ „ „	Wing.	× 13.
9.	„ <i>biumbrata</i> , sp. n.	Hypopygium from below.	× 50.
10.	„ <i>nigricauda</i> , Strobl.	„ „ above.	„
11.	„ „ „	„ „ below.	„
12.	„ <i>flava</i> , Mcq.	„ „ above.	„
13.	„ „ „	„ „ below.	„
14.	„ <i>modesta</i> , Winn.	„ „ above.	„
15.	„ „ „	„ „ below.	„
16.	„ <i>dorsalis</i> , Staeg.	„ „ above.	„
17.	„ „ „	„ „ below.	„
18.	„ <i>artriceps</i> , sp. n.	„ „ above.	„



F. W. Edwards, del.

C. Hentschel.

BRITISH MYCETOPHILIDAE.



